

# SERVICE MANUAL

# BE-3D CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-24WS2B	RM-862	French	SCC-K01P-A	KV-24WS2K	RM-862	OIRT	SCC-K20C-A
KV-24WS2D	RM-862	AEP	SCC-K07Q-A	KV-24WS2R	RM-862	OIRT	SCC-K20D-A
KV-24WS2E	RM-862	Spanish	SCC-K06P-A	KV-24WS2U	RM-862	UK	SCC-K04K-A



TRINITRON® COLOR TV  
**SONY®**

ITEM	MODEL	Television System	Channel Coverage	Colour System
French	B/G/H, D/K, L, I	L SECAM VHF: F2-F10 UHF: F21-F69 TV CABLE TV (1) VHF: B-Q UHF: S21-S44 PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 PAL I UHF: B21-B69 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)	
AEP	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: S1-S20 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)	
Spanish	B/G/H, D/K	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)	
OIRT	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)	
UK	I	UHF: U21-U69	PAL NTSC3.58/4.43 (video input only)	

MODEL	24WS2B	24WS2D	24WS2E	24WS2K 24WS2R	24WS2U
Power Consumption	105W	105W	105W	105W	169W

## SPECIFICATIONS

Picture Tube Super Trinitron WIDE  
Approx. 61 cm (24 inches)  
(Approx. 56 cm picture measured diagonally)  
110° -deflection

### Rear/Front Terminals

#### [REAR]

- ➡ 1 21-pin Euro connector (CENELEC standard)
- Inputs for audio and video signals
- Inputs for RGB
- Outputs for TV audio and video signals
- ➡ 2/ ➡ 2, 21-pin Euro connector (CENELEC standard)
- Inputs for audio and video signals
- Inputs for S video
- Outputs for TV audio and video signals (selectable)
- ➡ audio outputs - phono jacks
- Left/Right Speaker Terminals
- Surround Speaker Terminals

#### [FRONT]

- ➡ 3, Video input - phono jack
- ➡ 3, Audio inputs - phono jacks
- ➡ 3, S video input - 4 pin DIN
- 🎧 Stereo minijack - headphone jack

#### Sound output

- Left/Right 2x10W (RMS)  
2x20W (music power)
- Centre 2x2.5W (RMS)  
2x5W (music power)
- Surround 2x5W (RMS)  
2x10W (music power)
- Dimensions 696x427x472 mm approx.
- Weight Approx. 30.0 kg (with speakers)
- Supplied accessories
  - RM-862 Remote Commander (1)
  - Batteries R6 (2)
  - Surround Speakers (2)
  - Surround Speakers Leads (2)

#### Other features

Fastext, Dolby Pro Logic  
NICAM (KV-24WS2B, 24WS2E, 24WS2K, 24WS2R and 24WSU only)


**[RM-862]**

Remote control system    Infrared control  
 Power requirements        3V dc (2 batteries) R6 (size AA)  
 Dimensions                    Approx. 210x56x24 mm (w/h/d)  
 Weight                         Approx. 110g (Not including battery)

**Design and specifications are subject to change without notice.**

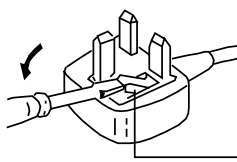
Model name Item	KV-24WS2B	KV-24WS2D	KV-24WS2E	KV-24WS2K KV-24WS2R	KV-24WS2U
PIP	OFF	OFF	OFF	OFF	OFF
MPIP	OFF	OFF	OFF	OFF	OFF
Rotation Coil	ON	ON	ON	ON	ON
VM Set	OFF	OFF	OFF	OFF	OFF
Scart 1	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON
AKB in 16:9 mode	ON	ON	ON	ON	ON
TXT	ON	ON	ON	ON	ON
FLOF	ON	ON	ON	ON	ON
TOP	ON	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON	OFF
Norm I	ON	OFF	OFF	OFF	ON
Norm D/K	ON	ON	ON	ON	OFF
Norm L	ON	OFF	OFF	OFF	OFF
Language Preset	French	German	Spanish	OIRT	English

### WARNING ( KV-24WS2U only )

The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the  mark.

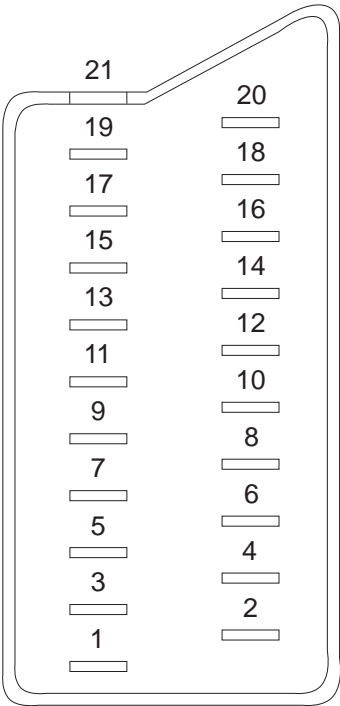
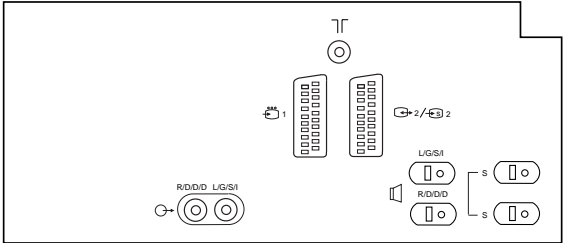
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME. IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.

When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.  
 Open the fuse compartment with the screwdriver blade and replace the fuse.

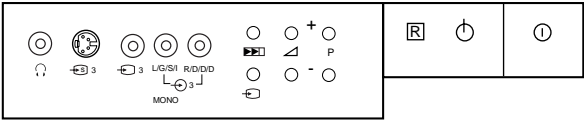
21 pin connector (  1,  2 /  2 )



Pin No.	1	2	4	Signal	Signal Level
1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Audio output B (Right)	Standard level : 0.5V rms Output impedance : Less than 1k ohms*
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Audio input B (Right)	Standard level : 0.5V rms Output impedance : More than 10k ohms*
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Audio output A (Left)	Standard level : 0.5V rms Output impedance : Less than 1k ohm*
4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ground (Audio)	
5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ground (Blue)	
6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Audio input A (Left)	Standard level : 0.5V rms Output impedance : Less than 10k ohm*
7	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	Blue input	0.7 ± 3dB, 75 ohms, positive
8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More10k ohms Input capacitance : Less than 2nF
9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ground (Green)	
10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Open	
11	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	Green	
12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Open	
13	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ground (Red)	
14	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ground (Blanking)	
15	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Red input	0.7 ± 3dB, 75 ohms, positive
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(S signal) cromia input	0.7 ± 3dB, 75 ohms, positive
16	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75 ohms
17	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ground (Video output)	
18	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ground (Video input)	
19	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Video output	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
20	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Video input	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
21	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Common ground (plug, sheild)	

☐ Connected    ☒ Not Connected (Open)    \* at 20Hz - 20kHz

Pin No.	Signal	Signal Level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm, positive Sync. 0.3V -3 + 10dB
4	C (S signal) input	0.3V ± 3dB 75ohm, positive Sync.



## TABLE OF CONTENTS

<i>Section</i>	<i>Title</i>	<i>Page</i>	<i>Section</i>	<i>Title</i>	<i>Page</i>
<b>1. GENERAL</b>			<b>5. DIAGRAMS</b>		
	Overview .....	7	5-1.	Block Diagrams .....	35
	Getting Started .....	8	5-2.	Circuit Boards Location .....	41
	TV Operation .....	9	5-3.	Schematic Diagrams and Printed Wiring Boards .....	41
	Advanced Operations .....	10		* D Board .....	45
	Dolby Pro Logic .....	17		* D3 Board .....	48
	Teletext .....	18		* A Board .....	50
	Optional Equipment .....	19		* C Board .....	60
	For Your Information .....	21		* A1 Board .....	63
<b>2. DISASSEMBLY</b>				* J Board .....	65
2-1.	Rear Cover Removal .....	22		* K1 Board .....	65
2-2.	Speaker Removal .....	22		IC Blocks .....	67
2-3.	Chassis Assy Removal .....	22	5-4.	Semiconductors .....	69
2-4-1.	Service Position (1) .....	22	<b>6. EXPLODED VIEWS</b>		
2-4-2.	Service Position (2) .....	23	6-1.	Chassis .....	71
2-5.	A Board Removal .....	23	6-2.	Picture Tube .....	72
2-6.	A Extension Board .....	23	<b>7. ELECTRICAL PARTS LIST</b> .....		73
2-7.	A1 Extension Boards .....	23			
2-8.	Picture Tube Removal .....	24			
	Removal and Replacement of The Main-Bracket				
	Bottom Plates .....	25			
<b>3. SET-UP ADJUSTMENTS</b>					
3-1.	Beam Landing .....	26			
3-2.	Convergence .....	27			
3-3.	White Balance .....	29			
<b>4. CIRCUIT ADJUSTMENTS</b>					
4-1.	Electrical Adjustments .....	30			
4-2.	Test Mode 2 : .....	33			
4-3.	BE-3D Self Diagnostic Software .....	34			


**CAUTION**

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

**WARNING !!**

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.

THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

**SAFETY-RELATED COMPONENT WARNING!!**  
COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.


**ATTENTION**

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

**ATTENTION !!**

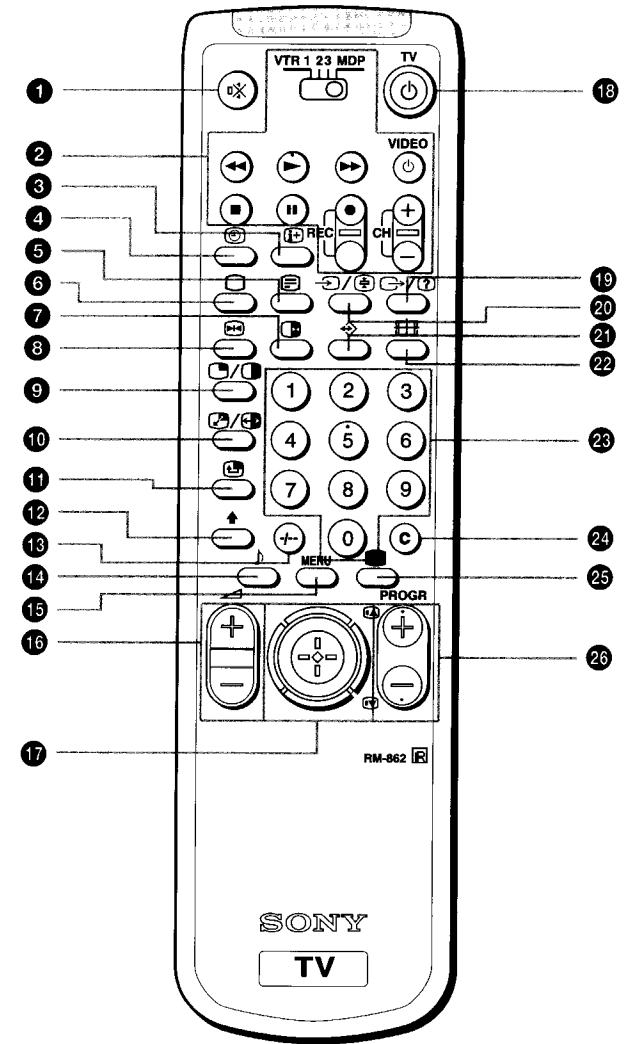
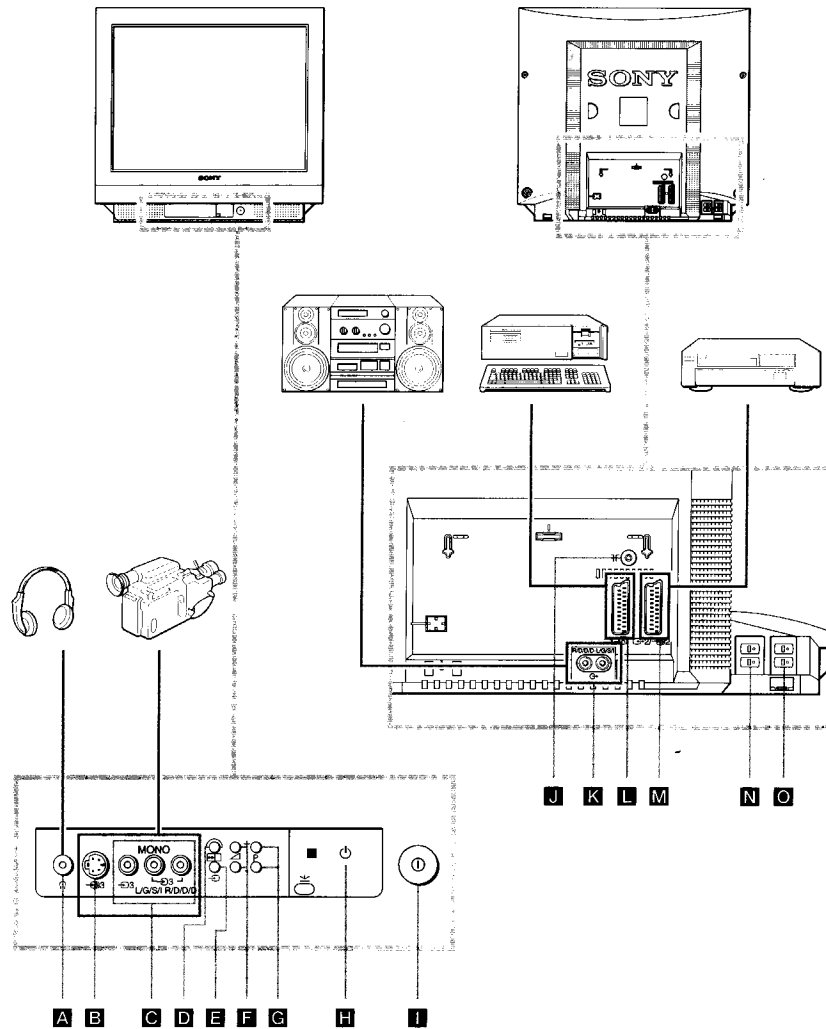
AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

**ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!**

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  SUR LES VUES EXPLODÉES ET LES LISTES DE PIÉCES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

## SECTION 1 GENERAL



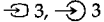









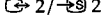
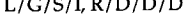

The operating instructions mentioned here are partial abstracts from the Operating Instructions Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

























## Overview

This section briefly describes the controls and the buttons on the TV set and on the Remote Commander. Please open the flap at the front of the Instruction manual for illustrations of the TV set and the Remote Commander. Letters in boxes refer to the buttons on the TV set, numbers in circles to the buttons on the Remote Commander. For more information, refer to the page numbers given next to each description.

### TV-Buttons and Terminals

Reference and Symbol	Name	Refer to Page
<b>Front of the set</b>		
<b>A</b> 	Headphones jack	33
<b>B</b> 	S video input jack	33
<b>C</b> 	Audio/video input jacks	33
<b>D</b> 	Automatic Preset button	12
<b>E</b> 	Input mode button	14
<b>F</b> 	Volume control	13
<b>G</b> 	Programme button	13
<b>H</b> 	Standby mode indicator	13
<b>I</b> 	Main power switch	13
<b>Rear of the set</b>		
<b>J</b> 	Aerial socket	11
<b>K</b> 	Audio phono jacks	33
<b>L</b> 	21 pin Euro connector	33
<b>M</b> 	21 pin Euro connector	33
<b>N</b> 	Left/Right speaker terminals	10
<b>O</b> 	Surround speaker terminals	10

### Remote Commander Operation

Reference and Symbol	Name	Refer to Page
<b>1</b> 	Muting on/off button	13
<b>2</b>	<b>VCR operation</b>	36
<b>VTR123MDP</b>	Video equipment selector	36
	Video equipment operation buttons	36
VIDEO  CH +/-		
<b>3</b> 	On-screen display button	13
<b>4</b> 	Time display button	13
<b>5</b> 	Teletext button	14
<b>6</b> 	TV power on/TV mode button	13, 14
<b>7 8 9 10 11 12</b>	No function on this set	-
<b>13</b> 	Double digit entering button	13
<b>14</b> 	Sound mode button	20
<b>15</b> <b>MENU</b>	Menu on/off button	15
<b>16</b> 	Volume control button	13
<b>17</b> 	Joystick for menu selection. Press to confirm selection (OK function)	15
<b>18</b> 	TV standby button	13
<b>19</b> 	No function on this set	-
	Teletext: reveal button	31
<b>20</b> 	Input mode button	14
	Teletext: Freezing the subpage	31
<b>21</b> 	Teletext: Favourite pages button	32
<b>22</b> 	Button to change screen format	14
<b>23</b> 	Number buttons	13
<b>24</b> 	Direct channel button	14
<b>25</b> 	Picture mode button	20
<b>26</b> <b>PROGR +/-</b>	Programme buttons	13
	Teletext: Page up/page down buttons	14

## Step 1

### Connecting the Speakers

Do not switch on the TV before you connect the speakers.

Dolby (\*) Pro Logic Surround normally requires 5 speakers:

**Centre speaker** (incorporated in the TV set)

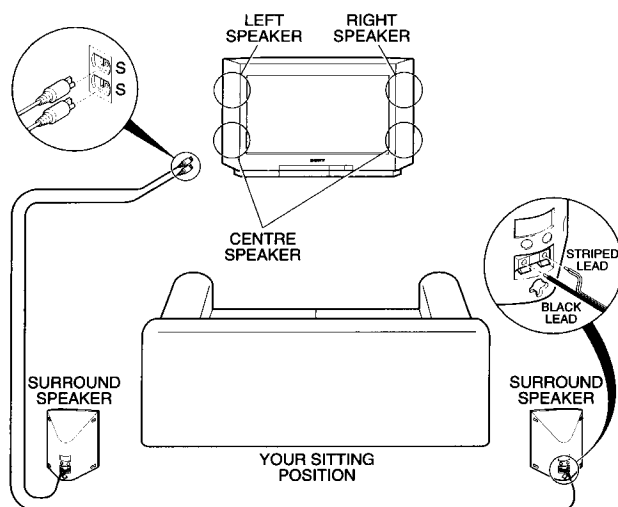
- for anchoring the stable sound image, like dialogue, to the TV screen

**Left and Right front speakers** (incorporated in the TV set)

- for the normal two channel stereo or bilingual broadcasts


**Surround speakers**

- for the special effects created by the surround channel



#### Notes:


- Connect the speakers using the leads provided. The striped lead (+) is for the red terminal of the speaker and the black lead (-) is for the black terminal.
- If you use your own speakers, make sure they are at least 8Ω impedance and are magnetically shielded. Otherwise picture distortion may occur.

(\*) Manufactured under license from Dolby Laboratories Licensing Corporation. DOLBY, the double-D symbol  and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

## Step 2

### Connecting the Aerial

(If you connect a VCR, skip to step 3)

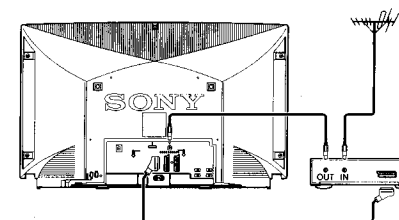
Insert the aerial plug tightly into the aerial socket . Use a good-quality aerial cable (not supplied), corresponding to the relevant regulations.

## Step 3

### Connecting a VCR

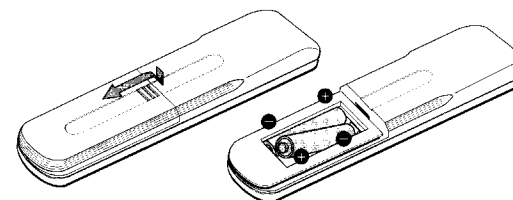
We recommend that you tune in the VCR signal to programme number "0". For details, see "Presetting Channels Manually" on page 17.

See "Connecting Optional Equipment" on page 33 for more information.



## Step 4

### Inserting the Batteries Into the Remote Commander





Respect your environment! Dispose of used batteries in an environmentally friendly way.

## Step 5

### Presetting Channels Automatically

With this function, the TV can automatically search and store up to 100 different channel numbers.

If you prefer manual presetting, refer to "Presetting Channels Manually" on page 17.

- 1** Plug into mains.  
Press the power switch  **I** on the TV set.
- 2** Press and hold the button  **D** on the TV set until the automatic menu is displayed and the search starts.  
  
After all available channels are stored, the normal TV picture is shown.

















**Note:** Channels are automatically stored as follows:

Programme 1	BBC1
Programme 2	BBC2
Programme 3	ITV
Programme 4	CH4 or S4C

## TV Operation

### TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the remote commander (numbers in circles). All basic functions are also available on the TV set (letters in boxes). Open the flap at the front of the Instruction Manual to see the illustrations of the Remote Commander and the TV set.

To	Press
Switch on	 <b>I</b> on TV
Switch off temporarily	 <b>18</b> TV is now in standby mode and  <b>H</b> indicator on TV lights up.
Switch on from standby mode	 <b>6</b> , <b>PROGR +/-</b>  <b>26</b> <b>G</b> or any number button  <b>23</b>
Switch off completely	 <b>I</b> on TV To save energy, switch off your TV completely when TV is not in use.
Select programmes	<b>PROGR +/-</b>  <b>26</b> <b>G</b> or number buttons  <b>23</b> For double digit number, press <b>-/-</b>  <b>13</b> then the number e.g. For 23, press <b>-/-</b>  <b>13</b> then 2 and 3.
Display on screen indications	 <b>3</b> . Press again to make the indications disappear.
Adjust the volume	 <b>+</b> or <b>-</b>  <b>16</b> <b>F</b>
Mute the sound	 <b>1</b> . Press again to restore the sound.
Display the time (only available when teletext is broadcast)	 <b>4</b> . Press again to make the display disappear.

# TV Operation (continued)

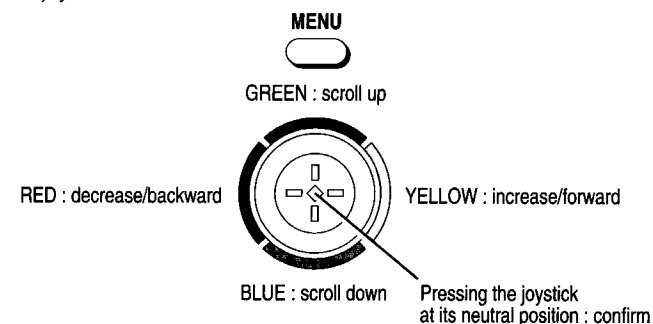
To	Press
Tune in a channel temporarily	<b>C</b> 24. The indication "C" appears. Enter the double digit number. e.g. For 4, press 0 then 4.
View video input picture (see page 34 for detailed information)	<b>↔</b> 20 <b>E</b> repeatedly until the desired video input appears. Press <b>□</b> 6 to restore the TV picture.
Operate Screen Mode (see page 19 for detailed information)	<b>⌂</b> 22 4:3 → Smart → Zoom → Wide When using zoom mode, select 'scroll' to see the cut-off part of the screen.
View teletext (see page 31 for detailed information)	
Switch on	<b>≡</b> 5
Select a page	three number buttons 23 or <b>⏮</b> 26 (for next page) or <b>⏭</b> 26 (for previous page).
Use fastext	Push joystick 17 to select a colour.
Switch off	<b>□</b> 6

## Advanced Operations

# Adjusting and Setting the TV Using the Menu

You can adjust and set various functions on the TV using the following remote commander buttons:

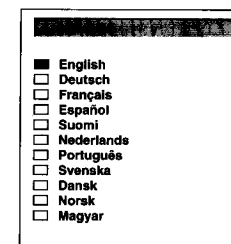
- 1 Press MENU 15 to switch menu on/off.
- 2 Use the joystick 17 as follows.



## Choosing the Menu Language

This function enables you to change the language of the menu screens.

- 1 Press power switch 11 on the TV. If the standby indicator 12 on the TV is lit, press **□** 6 or a number button 23 on the Remote Commander.
- 2 Press the MENU button 15 on the remote commander.



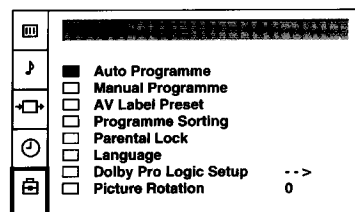
- 3 Push to blue or green to select the language you want then push to yellow.
- 4 Press the MENU button 15 to restore the normal TV picture.

## Presetting Channels Automatically

You may have already preset the channels automatically by using the method shown on page 12. You can also preset channels automatically by using the remote commander as follows:

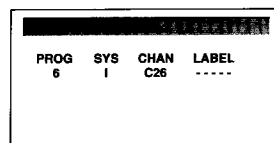
1 Press the MENU button **15**.

2 Push joystick **17** to blue or green to select the symbol **18** on the menu screen then push to yellow.



3 Push to blue or green to select 'Auto Programme'.

4 Push to yellow and hold until the automatic menu is displayed and the search starts.  
After all available channels have been preset, the normal TV picture is shown.



**Note:** Channels are automatically stored as follows:

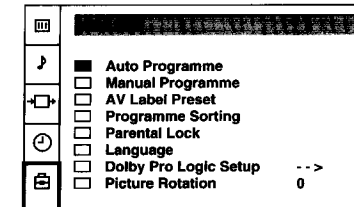
Programme 1	BBC1
Programme 2	BBC2
Programme 3	ITV
Programme 4	CH4 or S4C

## Presetting Channels Manually

This function enables you to preset channels one by one to different programme numbers. This is also convenient for allocating programme numbers to various video input sources.

1 Press the MENU button **15**.

2 Push joystick **17** to blue or green to select the symbol **18** on the menu screen then push to yellow.



3 Push to blue or green to select 'Manual Programme' then push to yellow.

PROG	SYS	CHAN	LABEL	AFT
<input type="checkbox"/> 0	I	C29	-----	ON
<input type="checkbox"/> 1	I	C31	-----	ON
<input type="checkbox"/> 2	I	C32	-----	ON
<input type="checkbox"/> 3	I	C36	-----	ON
<input checked="" type="checkbox"/> 4	I	C37	-----	ON
<input type="checkbox"/> 5	I	C40	-----	ON
<input type="checkbox"/> 6	I	C41	-----	ON
<input type="checkbox"/> 7	I	C44	-----	ON
<input type="checkbox"/> 8	I	C49	-----	ON
<input type="checkbox"/> 9	I	C52	-----	ON

4 Push to blue or green to select on which programme number you want to preset a channel then push to yellow.

5 Push to blue or green to select the TV broadcast system 'I' or a video input source (AV1, AV2,...) then push to yellow twice.

6 Select the first number digit of 'CHAN' (channel) then the second number digit of 'CHAN' with the number buttons **29** on the remote commander  
or  
Push joystick **17** to blue or green to search for the next available channel.



7 If you want to store the channel, go to step 8. If not, select a new channel using the number buttons **29** on the remote commander or push to blue or green to resume the search.

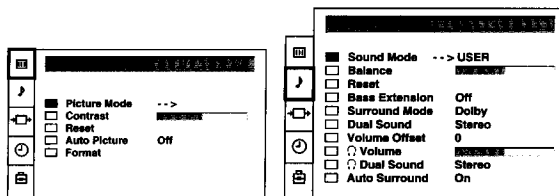
- 8 Press the joystick 17.
- 9 Repeat steps 4 to 8 to preset other channels.
- 10 Press the MENU button 15 to restore the normal TV picture.

## Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste.

- 1 Press the MENU button 15.

- 2 Push joystick 17 to blue or green to select  for picture control or  for sound control then push to yellow.



- 3 Push to blue or green to select the desired item then push to yellow.
- 4 Push to red or yellow to alter the item then press the joystick 17.  
For the effect of each control, see the following tables.
- 5 Repeat steps 3 and 4 to adjust the other items.
- 6 Press the MENU button 15 to restore the normal TV picture.

## Adjusting the Picture and Sound (continued)

### PICTURE CONTROL Effect

Picture Mode	<ul style="list-style-type: none"> <li>• User → Game → Movie → Sports → Live</li> <li>In 'User' mode, you can preset Brightness, Colour, Sharpness and Hue (NTSC signals only) as follows:               <ol style="list-style-type: none"> <li>1 Push joystick 17 to blue or green to select the desired item then push to yellow.</li> <li>2 Push to red or yellow to adjust then press the joystick 17.</li> <li>3 Push to red to return to the PICTURE CONTROL menu.</li> </ol> </li> </ul>
Contrast	<ul style="list-style-type: none"> <li>• Darker —   — Brighter</li> </ul>
Reset	<ul style="list-style-type: none"> <li>• Resets picture to the factory preset levels.</li> </ul>
Auto Picture	<ul style="list-style-type: none"> <li>• All the picture levels automatically change according to the surrounding lighting level. (Auto Picture Control)</li> </ul>
Format	<ul style="list-style-type: none"> <li>• There are three options.               <ol style="list-style-type: none"> <li>Format (4:3 → Smart → Zoom → Wide), Scroll or Auto 16:9.</li> </ol> <p>To preset these, follow the procedure below.</p> <ol style="list-style-type: none"> <li>1 Push joystick 17 to blue or green to select the desired item then push to yellow.</li> <li>2 Push to red or yellow to change the setting then press the joystick 17.</li> <li>3 Push to red to return to the PICTURE CONTROL menu.</li> </ol> </li> </ul>

#### Format/Scroll

Once 'Zoom' has been selected in 'Format' mode, you can then choose the 'Scroll' function to scroll the screen upwards or downwards to see the cut-off part (e.g. subtitles)

or

after selecting 'Zoom' and returning to the normal picture, push joystick 17 to blue or green to scroll then press joystick 17.

#### Auto 16:9

Automatically selects 16:9 picture mode when receiving a 16:9 broadcast (set to 'Off' if signal reception is weak).

## Adjusting the Picture and Sound (continued)

### SOUND CONTROL Effect

Sound Mode	<ul style="list-style-type: none"> <li>• User → Rock → Jazz → Pop</li> <li>In 'User' mode, you can preset Treble and Bass as follows.               <ol style="list-style-type: none"> <li>1 Push joystick <b>17</b> to blue or green to select the item then push to yellow.</li> <li>2 Push to red or yellow to adjust then press the joystick <b>17</b>.</li> <li>3 Push to red to return to the 'SOUND CONTROL' menu.</li> </ol> </li> </ul>
Balance	<ul style="list-style-type: none"> <li>• Left ———   ——— Right</li> </ul>
Reset	<ul style="list-style-type: none"> <li>• Resets sound to the factory preset levels.</li> </ul>
Bass Extension	<ul style="list-style-type: none"> <li>• Boosts bass by a fixed amount.</li> </ul>
Surround Mode	<ul style="list-style-type: none"> <li>• Choice among special sound effects.               <ul style="list-style-type: none"> <li>Pro Logic → Pseudo Stereo → Spatial → Club</li> <li>→ Theatre → Hall → Church → Stadium → Off</li> </ul> </li> </ul>
Dual Sound	<ul style="list-style-type: none"> <li>• A: Left channel → B: Right channel → stereo → mono</li> </ul>
Volume Offset	<ul style="list-style-type: none"> <li>• Presets the volume level for individual programmes.               <ul style="list-style-type: none"> <li>-12 ——— 0 ——— +12</li> </ul> </li> </ul>
Volume	<ul style="list-style-type: none"> <li>• Adjusts the headphone volume.</li> </ul>
Dual Sound	<ul style="list-style-type: none"> <li>• Selects the headphone channels.               <ul style="list-style-type: none"> <li>A: Left channel → B: Right channel → stereo → mono</li> </ul> </li> </ul>
Auto Surround	<ul style="list-style-type: none"> <li>• Automatically selects Pro Logic Surround sound when transmitted. (set to 'Off' if signal is weak).</li> </ul>


### Changing Modes Quickly

You can quickly change the Surround Mode or the Picture Mode without entering the 'SOUND CONTROL' or the 'PICTURE CONTROL' menu.

- 1 Press **25** for the picture or **14** for the sound.
- 2 Push joystick **17** to blue or green to select the desired mode.
- 3 Press **25** or **14** again to restore the normal TV screen.

## Manual Fine-Tuning

Normally, the automatic fine-tuning (AFT) function is operating. If the picture is distorted however, you can manually fine-tune the TV to obtain a better picture reception.


- 1 Press the MENU button **15**.
- 2 Push joystick **17** to blue or green to select the symbol  on the menu screen then push to yellow.
- 3 Push to blue or green to select 'Manual Programme' then push to yellow.

	PROG	SYS	CHAN	LABEL	AFT
<input type="checkbox"/>	0		C29	-----	ON
<input type="checkbox"/>	1		C31	-----	ON
<input type="checkbox"/>	2		C32	-----	ON
<input type="checkbox"/>	3		C36	-----	ON
<input checked="" type="checkbox"/>	4		C37	-----	ON
<input type="checkbox"/>	5		C40	-----	ON
<input type="checkbox"/>	6		C41	-----	ON
<input type="checkbox"/>	7		C44	-----	ON
<input type="checkbox"/>	8		C49	-----	ON
<input type="checkbox"/>	9		C52	-----	ON

- 4 Push to blue or green to select the programme number which corresponds to the channel you want to manually fine-tune.
- 5 Push to yellow repeatedly until the AFT position changes colour.
- 6 Push to blue or green to fine tune the channel frequency ( -15 to +15).
- 7 Press the joystick **17**.
- 8 Repeat steps 4 to 7 to fine-tune other channels.
- 9 Press the MENU button **15** to restore the normal TV picture.

## Sorting Programme Positions

This function enables you to exchange the programme positions.


- 1 Press the MENU button **15**.
- 2 Push joystick **17** to blue or green to select the symbol  on the menu screen then push to yellow.
- 3 Push to blue or green to select 'Programme Sorting' then push to yellow.
 


	Auto Programme
	Manual Programme
	AV Label Preset
	Programme Sorting
	Parental Lock
	Language
	Dolby Pro Logic Setup -->
	Picture Rotation 0
- 4 Push to blue or green to select the channel you want to exchange then push to yellow.
 

PROG	SYS	CHAN	LABEL
	0	I	C28 BBC-W
	1	I	C29 VHS-2
	2	I	C35 CNN--
	3	I	C38 -----
	4	I	C40 MV-CH
	5	I	C42 VHS-1
	6	I	C55 -----
	7	I	C56 8MM
	8	I	C57 -----
	9	I	C58 -----
- 5 Push to blue or green to select the programme position of the channel you want exchanged then push to yellow.
- 6 Repeat steps 4 to 5 if you wish to exchange other programme positions.
- 7 Press the MENU button **15** to restore the normal TV picture.

## Using Parental Lock

This function enables you to prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

- 1 Press the MENU button **15**.
- 2 Push joystick **17** to blue or green to select the symbol  on the menu screen then push to yellow.
- 3 Push to blue or green to select 'Parental Lock' then push to yellow.
 

	Auto Programme
	Manual Programme
	AV Label Preset
	Programme Sorting
	Parental Lock
	Language
	Dolby Pro Logic Setup -->
	Picture Rotation 0
- 4 Push to blue or green to select the channel you want to block then push to yellow.  
A symbol  appears before the programme number to indicate that this channel is now blocked.
 

PROG	SYS	CHAN	LABEL
	0	I	C28 BBC-W
	1	I	C29 VHS-2
	2	I	C35 CNN--
	3	I	C38 -----
	4	I	C40 MV-CH
	5	I	C42 VHS-1
	6	I	C55 -----
	7	I	C56 8MM
	8	I	C57 -----
	9	I	C58 -----
- 5 Repeat step 4 if you wish to block other channels.
- 6 Press the MENU button **15** to restore the normal TV picture.

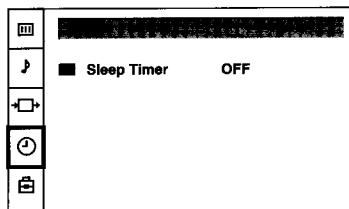
**Note:** To unblock, push to yellow after selecting the channel to unblock in the 'Parental Lock' menu.

## Using the Sleep Timer

This function enables you to select a time period after which the TV automatically switches into standby mode.

**1** Press the MENU button **15**.

**2** Push joystick **17** to blue or green to select the symbol **18** on the menu screen then push to yellow.



**3** Push to yellow.

**4** Push to red or yellow to set time delay and press the joystick **17**.

OFF 0:30 1:00 1:30 ..... 3:30 4:00

One minute before the TV switches into standby mode, a message is displayed on the screen.

**5** Press the MENU button **15** to restore the normal TV picture.

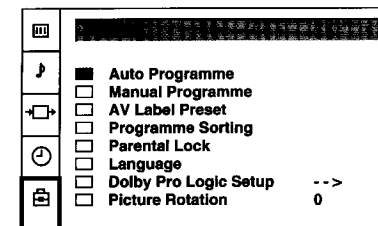
## Adjusting the Picture Rotation

(KV-28WS2U only)

If, due to the earth magnetism, the picture slants, you can use the function 'Picture Rotation' to readjust the picture.

**1** Press the MENU button **15**.

**2** Push joystick **17** to blue or green to select the symbol **18** on the menu screen then push to yellow.



**3** Push to blue or green to select 'Picture Rotation' then push to yellow.



**4** Push to red or yellow to adjust the picture rotation then press the joystick **17**. The adjusting range is -5 to +5.

**5** Press the MENU button **15** to restore the normal TV picture.

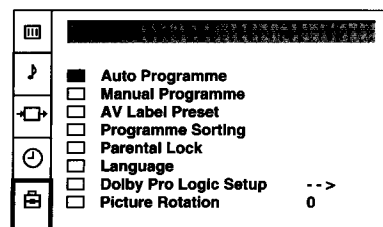
## Skippping Programme Positions

This function enables you to skip unused programme positions when selecting them with the PROGR+/- buttons. However, you can still watch the channel of the skipped programme position by using the number buttons.

1 Press the MENU button .

2 Push joystick  to blue or green to select the symbol  on the menu screen then push to yellow.


3 Push to blue or green to select 'Manual Programme' then push to yellow.




4 Push to blue or green to select the programme position you want to skip then push to yellow.

5 Push to blue or green until '---' appears in the 'SYS' position.

PROG	SYS	CHAN	LABEL	AFT
<input type="checkbox"/> 0		C29	----	ON
<input type="checkbox"/> 1		C31	----	ON
<input type="checkbox"/> 2		C32	----	ON
<input type="checkbox"/> 3		C36	----	ON
<input checked="" type="checkbox"/> 4		C37	----	ON
<input type="checkbox"/> 5		C40	----	ON
<input type="checkbox"/> 6		C41	----	ON
<input type="checkbox"/> 7		C44	----	ON
<input type="checkbox"/> 8		C49	----	ON
<input type="checkbox"/> 9		C52	----	ON

6 Press the joystick .



7 Repeat steps 4 to 6 to skip other programme positions.

8 Press the MENU button  to restore the normal TV picture.

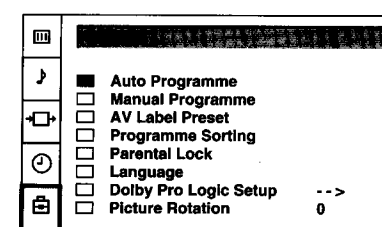
## Captioning a Station Name

Names for channels are usually automatically taken from teletext if available. You can however name a channel or an input video source using up to five characters (letters or numbers).

1 Press the MENU button .

2 Push joystick  to blue or green to select the symbol  on the menu screen then push to yellow.


3 Push to blue or green to select 'Manual Programme' then push to yellow.




4 Push to blue or green to select the channel you wish to caption then push to yellow repeatedly until the first element of the 'LABEL' position is highlighted.

5 Push to blue or green to select a letter or number and push to yellow (select '-' for a blank). Select the other four characters in the same way.

PROG	SYS	CHAN	LABEL	AFT
<input type="checkbox"/> 0		C29	----	ON
<input type="checkbox"/> 1		C31	----	ON
<input type="checkbox"/> 2		C32	----	ON
<input type="checkbox"/> 3		C36	----	ON
<input checked="" type="checkbox"/> 4		C37	A----	ON
<input type="checkbox"/> 5		C40	----	ON
<input type="checkbox"/> 6		C41	----	ON
<input type="checkbox"/> 7		C44	----	ON
<input type="checkbox"/> 8		C49	----	ON
<input type="checkbox"/> 9		C52	----	ON

6 After selecting all the characters, press the joystick .

7 Repeat steps 4 to 6 to caption names for other channels.


8 Press the MENU button  to restore the normal TV screen.

## Setting Up Dolby Pro Logic

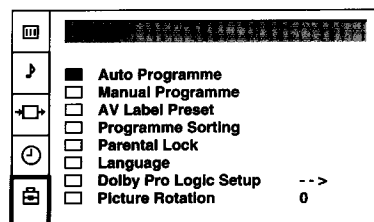
Before viewing Dolby Pro Logic encoded programmes, you have to set up the levels or modes of the speakers.

Normally this is required only when you install the TV and the speakers or change their positions.

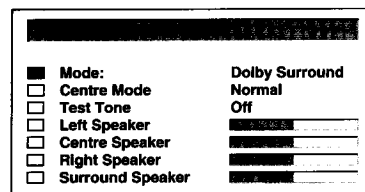
**1** Press the MENU button **15**.

**2** Push joystick **17** to blue or green to select the symbol  on the menu screen then push to yellow.

**3** Push to blue or green to select 'Dolby Pro Logic Setup' then push to yellow.



**4** Push to blue or green to select 'Mode' then push to yellow.



**5** Push to red or yellow to select the mode then press the joystick **17**.

Dolby Pro Logic: if you want to use all the five speakers  
Dolby 3 Stereo: if you do not want to use the surround speakers

**6** Push to blue or green to select 'Centre Mode' then push to yellow.

**7** Push to red or yellow to select the desired mode then press the joystick **17**.

Normal: if you want to activate all the speakers  
Wide: if you want a wider bandwidth sound effect  
Phantom: if you do not want to use the centre speaker

**8** Push to blue or green to select 'Test Tone' then push to yellow.

**9** Push to red or yellow to select 'On' then press the joystick **17**.  
The test tone cycles through all the speakers.

**10** Push to blue to select 'Left Speaker' then push to yellow.  
The test tone stays at the selected speaker only.

**11** Push to red or yellow to adjust the sound level then press the joystick **17**.

**12** Push to blue or green to select another speaker then push to yellow.


**13** Repeat steps 11 to 12 to adjust the sound levels of all the other speakers.

**14** Press the MENU button **15** to restore the normal TV screen.

## Presetting Dolby Pro Logic


With Dolby Pro Logic Surround mode selected, you can experience three dimensional sound when watching Dolby Surround encoded programmes.

To experience programmes encoded in Dolby Surround sound, preset the surround mode to 'Pro Logic' as shown below.

**1** Press  **14** on the remote commander.

**2** Push joystick **17** to blue or green to select 'Pro Logic'.

- ☐ Off
- ☒ Pro Logic
- ☐ Pseudo Stereo
- ☐ Spatial
- ☐ Club
- ☐ Theatre
- ☐ Hall
- ☐ Church
- ☐ Stadium

**3** Press  **14** to restore the normal TV screen.

Or alternatively you can select 'Pro Logic' in the surround mode of the 'SOUND CONTROL' menu (see page 20)

## Teletext


### Teletext

Most TV channels broadcast information via teletext. The index page of the broadcaster (usually page 100) gives you information on how to use the service.


Make sure you use a TV channel with a strong signal, otherwise teletext errors may occur.

### Switching Teletext on and off






**1** Select the channel which carries the teletext service you wish to view.

**2** Press  **5** to display teletext.  
If no teletext signal is broadcast, the indication P100 is displayed on a black screen.

**3** Input three digits for the page number using the number buttons **26**.  
The page counter searches for the page and after some seconds the page is displayed.

**4** Press  **6** to return to the normal TV picture.

### Using Other Teletext Functions

To	Press
Access the next or preceding teletext page	 <b>26</b> for the next page or  <b>26</b> for the preceding page
Mix the mode	 <b>5</b> when in teletext mode. Now the teletext page is superimposed on the TV programme. Press again to return to the normal teletext display.
Freeze a teletext subpage	 <b>20</b> . Press once again to cancel.
Reveal hidden information (e.g.: answers to a quiz)	 <b>19</b> . Press once again to cancel.

## Favourite page system

You can store up to four of your favourite teletext pages per Teletext service. In this way you have quick access to the pages you frequently use.

### Storing pages

- 1 Use the number buttons **29** to select the page you would like to store.
- 2 Press **↔** **21** twice.  
The colour prompts at the bottom of the screen flash.
- 3 Push the joystick **17** to the desired colour to store the selected page.  
The page is now stored on this colour.

Repeat steps 1 to 3 for the other 3 pages.

### Displaying the Favourite Pages

- 1 Press **↔** **21**.
- 2 Push the joystick **17** to the colour on which the desired page is stored.

Make sure you press **↔** **21**, otherwise the normal Fastext facility operates.

## Using Fastext

(only available, if the TV station broadcasts Fastext signals)

With Fastext you can access pages with one key stroke. When Fastext is broadcast, a colour-coded menu appears at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue marks **17** on the Remote Commander.

Push the joystick **17** to the colour mark which corresponds to the colour-coded menu. The page is displayed after some seconds.

## Optional Equipment

## Connecting Optional Equipment

There is a wide range of optional equipment you can connect to your TV. Refer to the illustrations on the front flap page of this manual.

Symbol	Acceptable input signals	Available output signals
<b>1 L</b>	Normal audio/video and RGB	Audio/video from TV tuner
<b>2/</b> <b>2 M</b>	Normal audio/video and S video	Audio/video from selected source
<b>3,</b> <b>3 B</b> <b>3 C</b>	Normal audio/video and S video	No output
<b>K</b>	No inputs	Audio from selected source.

### Connecting Headphones

Plug in the headphones to the socket **A** on the front of the TV.

### About S video input

Video signals may be separated into Y (luminance) and C (chrominance) signals. Separating the two signals prevents interference and thus improves the picture quality.

### Notes on connections:

- If the picture or sound is distorted, move the VCR away from the TV.
- When connecting a monaural VCR, connect only the white jack to both the TV and VCR.
- Select 'TV' for output in the 'VIDEO CONNECTION' menu if you connect a decoder to **2/** **2 M** (see page 34).

## Selecting Input and Output Signals

This section explains how to select the output signal from **2/2 M** and how to select and view the input. You can use direct access buttons **20 E** to select the input or the menu system to select input and output.

### Selecting Input Signals With Direct Access Buttons

Press **20 E** repeatedly .

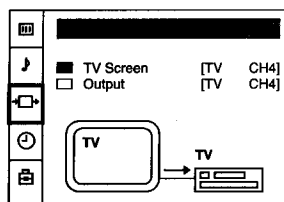
Press **6** to restore the normal TV picture.

Symbol on the screen	Input Signal
<b>1</b>	Audio/video through Euro AV connector <b>L</b>
<b>2</b>	RGB through Euro AV connector <b>L</b>
<b>2 M</b>	Audio/video through Euro AV connector <b>M</b>
<b>2 M</b>	S video through Euro AV connector <b>M</b>
<b>3</b>	Audio/video through the phono jacks <b>C</b>
<b>3</b>	S video through the 4 pin DIN <b>B</b>

### Selecting With the Video Connection Menu

**1** Press the MENU button **19**.

**2** Push joystick **17** to blue or green to select **TV** for “Video Connection” then push to yellow.



**3** Push to blue or green to select ‘TV Screen’ (input source for the TV Screen) or ‘Output’ (output source for **2/2 M**) then push to yellow **17**.

**4** Push to red or yellow repeatedly to select the desired input or output source then press the joystick **17**.

**5** Press the MENU button **19** to restore the normal TV picture.

**Note:** If you select ‘AUTO’ for output, the output source automatically becomes the same as the desired input source.

## Using AV Label Preset

This function enables you to label the input sources using up to five characters (letters or numbers).

**1** Press the MENU button **19**.

**2** Push joystick **17** to blue or green to select the symbol **18** on the screen then push to yellow.

**3** Push to blue or green to select ‘AV Label Preset’ then push to yellow.

INPUT	LABEL
<b>AV1</b>	-----
<b>RGB</b>	-----
<b>AV2</b>	-----
<b>YC2</b>	-----
<b>AV3</b>	-----
<b>YC3</b>	-----

**4** Push to blue or green to select the desired input source then push to yellow.

**5** Push to blue or green to select a letter or number then push to yellow (select ‘-’ for a blank).  
Select the other four characters in the same way.

**6** After selecting all the characters, press the joystick **17**.

**7** Repeat steps 4 to 6 to label other input sources.

**8** Press the MENU button **19** to restore the normal TV screen.

## Remote Control of Other Sony Equipment

You can control other Sony remote controlled equipment using the buttons ② on the Remote Commander.

- 1 Set the VTR 1/2/3 MDP selector according to the equipment
  - VTR 1: Beta VCR
  - VTR 2: 8mm VCR
  - VTR 3: VHS VCR
  - MDP: Video Disk Player

- 2 Use the buttons ② to operate the equipment.

- Notes:**
- If your video equipment has a COMMAND MODE selector, set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander
  - If the equipment does not have a certain function, the corresponding button on the Remote Commander does not work.

## For Your Information

## Troubleshooting

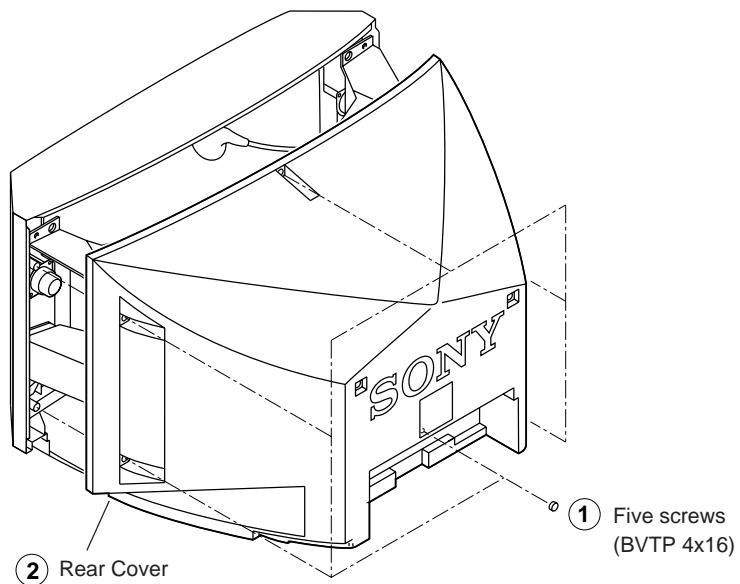
Here are some simple solutions to the problems which affect the picture and sound.

Problem	Solution
No picture (screen is dark), no sound	<ul style="list-style-type: none"> <li>• Plug the TV in.</li> <li>• Press ① <b>I</b> on the TV. (If <b>H</b> indicator is on, press <b>□</b> ⑥ or a programme number ②③ on the Remote Commander.)</li> <li>• Check the aerial connection.</li> <li>• Check if the selected video source is on.</li> <li>• Turn the TV off for 3 or 4 seconds then turn it on again using ① <b>I</b>.</li> </ul>
Poor or no picture (screen is dark), but good sound	<ul style="list-style-type: none"> <li>• Press MENU ⑮ to enter the 'PICTURE CONTROL' menu and adjust 'Contrast', 'Brightness' and 'Colour'.</li> </ul>
Poor picture quality when watching an RGB video source.	<ul style="list-style-type: none"> <li>• Press <b>↔</b> ②⑩ <b>E</b> repeatedly to select <b>↔</b>.</li> </ul>
Good picture but no sound	<ul style="list-style-type: none"> <li>• Press <b>△</b> + ⑩ <b>F</b>.</li> <li>• If <b>⊗</b> is displayed on the screen, press <b>⊗</b> ①.</li> <li>• Check the speaker lead connections.</li> </ul>
No colour for colour programmes	<ul style="list-style-type: none"> <li>• Press MENU ⑮ to enter the 'PICTURE CONTROL' menu, select 'Reset' then press the joystick ⑰.</li> </ul>
Remote Commander does not function.	<ul style="list-style-type: none"> <li>• Replace the batteries</li> </ul>

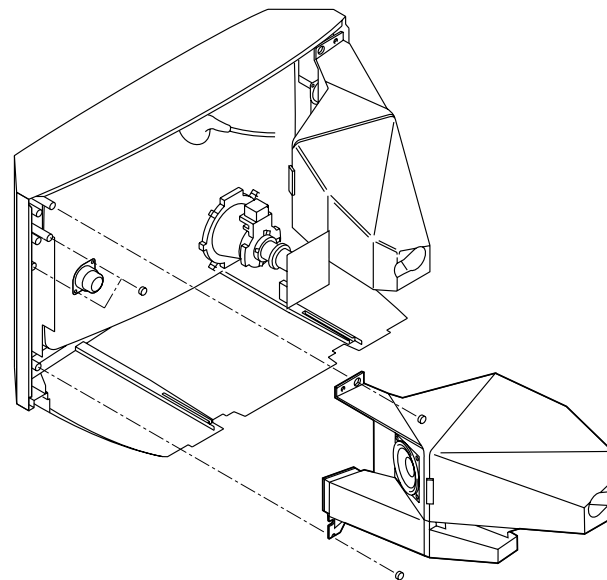
If you continue to have problems, have your TV serviced by qualified personnel.  
Never open the casing yourself.

## SECTION 2 DISASSEMBLY

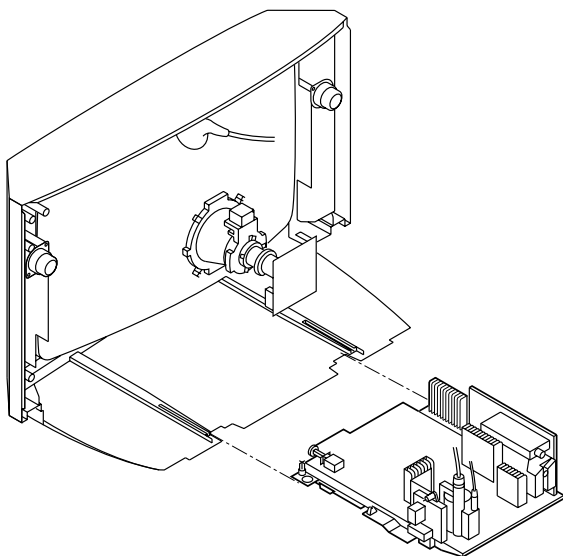
### 2-1. REAR COVER REMOVAL



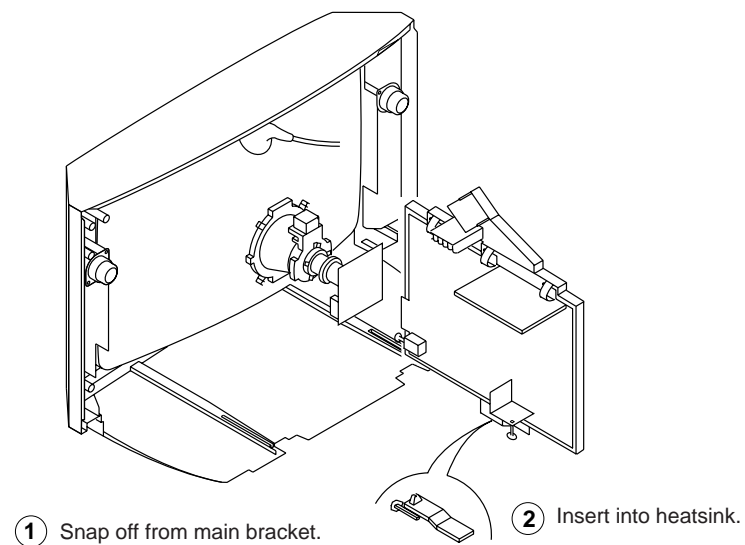
### 2-2. SPEAKER REMOVAL



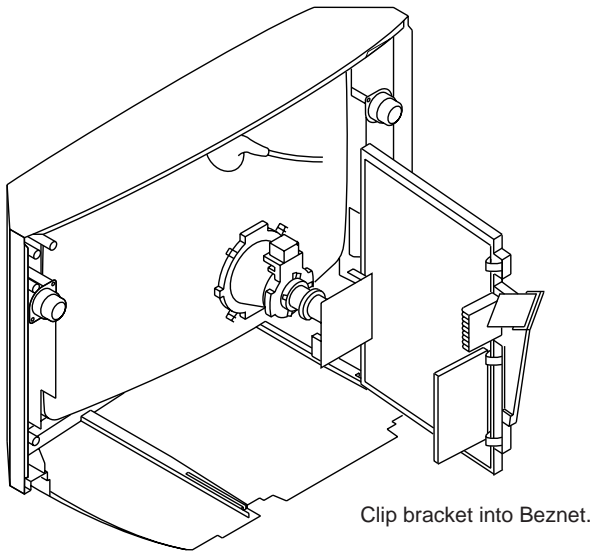
### 2-3. CHASSIS ASSY REMOVAL



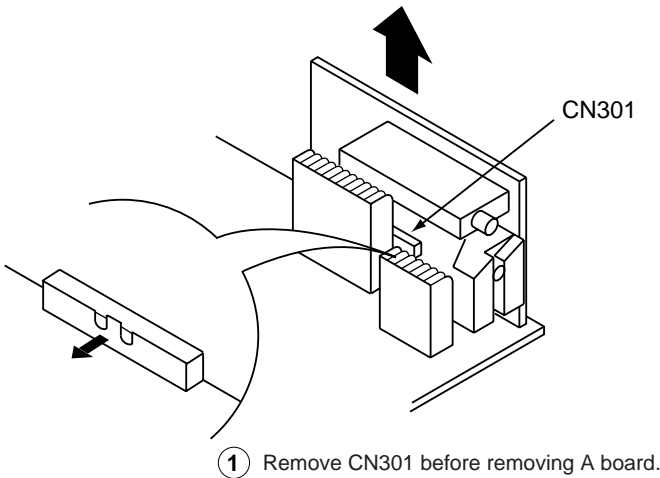
### 2-4-1. SERVICE POSITION (1)



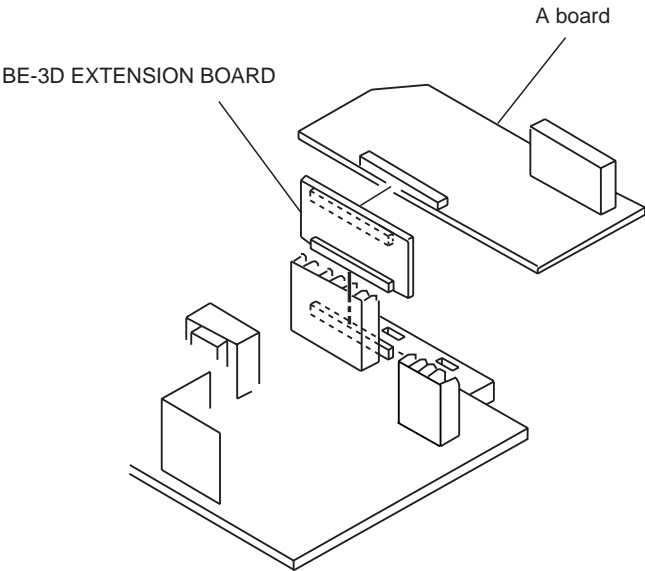
2-4-2. SERVICE POSITION (2)



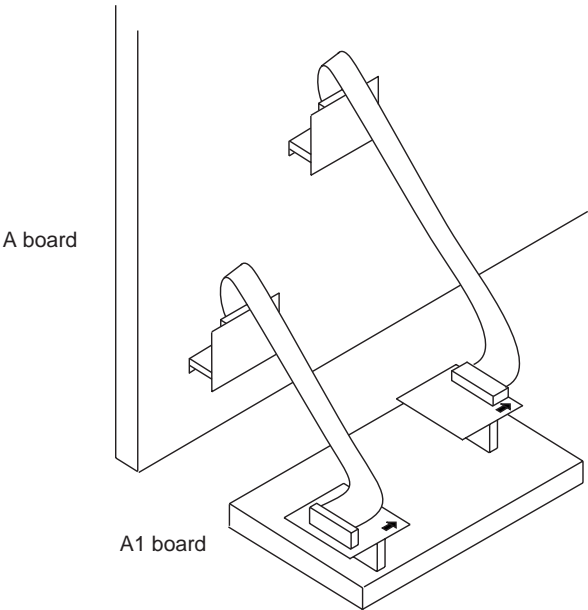
2-5. A BOARD REMOVAL



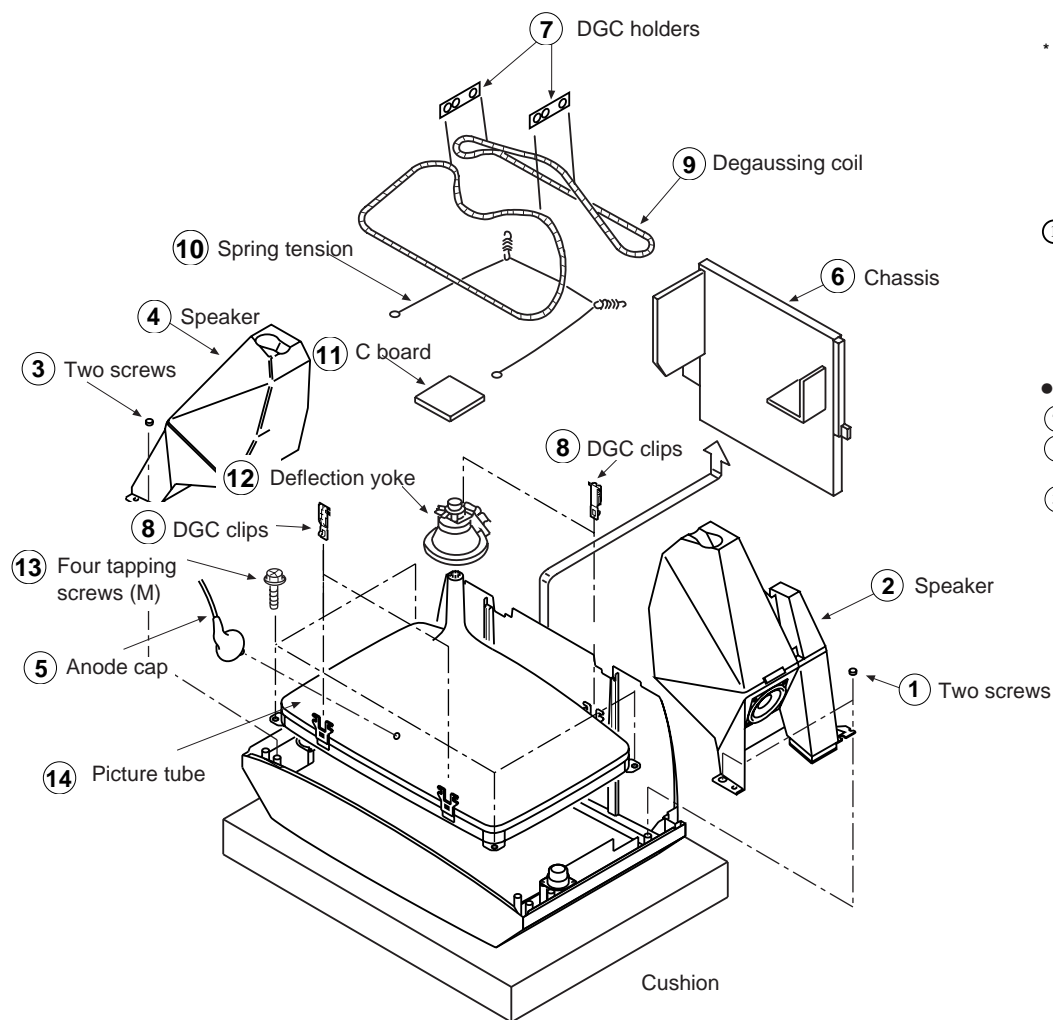
2-6. A EXTENSION BOARD



2-7. A1 EXTENSION BOARDS



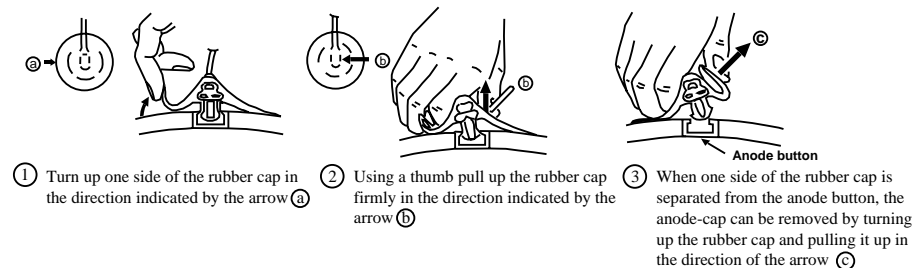
## 2-8. PICTURE TUBE REMOVAL



## • REMOVAL OF ANODE-CAP

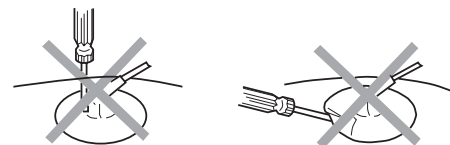
**Note:** Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

### \* REMOVING PROCEDURES.



### • HOW TO HANDLE AN ANODE-CAP

- ① Don't damage the surface of anode-cap with sharp shaped material !
- ② Don't press the rubber hardly not to hurt inside of anode-caps !  
A metal fitting called as shatter-hook terminal is built into the rubber.
- ③ Don't turn the foot of rubber over hardly !  
The shatter-hook terminal will stick out or damage the rubber.



## REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES.

### (1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the D Board printed circuit, the bottom plates fitted to the main chassis bracket require to be removed. This is performed by cutting the gates with a sharp wire cutter at the locations shown and indicated by arrows.

**Note :** There are 5 plates fitted to the main bracket and secured by 4 or 6 gates. Only remove the necessary plate to gain access to the circuit board.

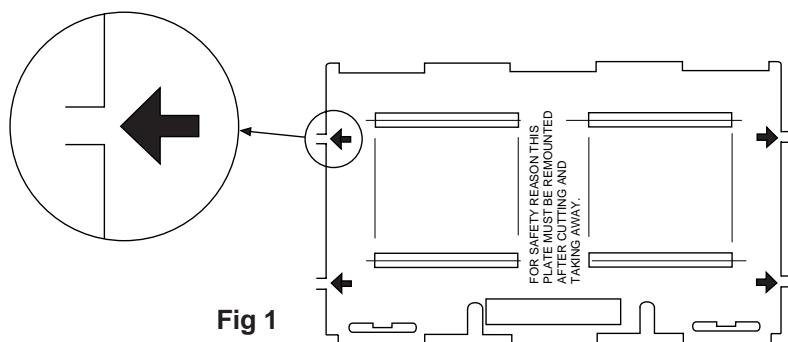


Fig 1



For safety reasons, on no account should the plates be removed and not refitted after servicing.

### (2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.

The plates are identified by markings A-B-C-D-E on their top side.

1. Identify the plate by locating its marking.
2. Turn the plate over noting where the marking is located.
3. Locate the corresponding marking indicated on the main chassis bracket. See Fig 2.
4. Refit the plate as indicated in Fig 3 with the markings located next to each other.

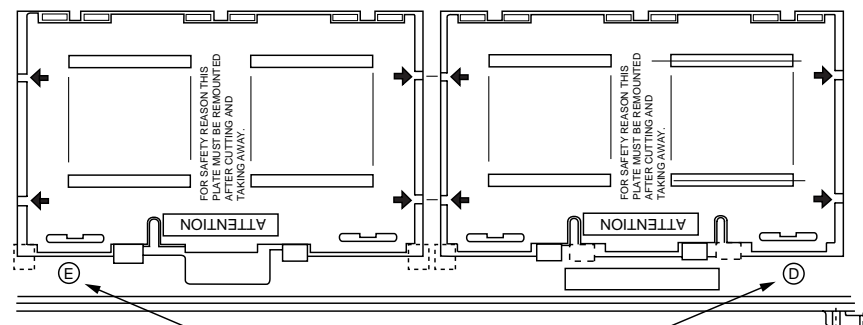


Fig 2

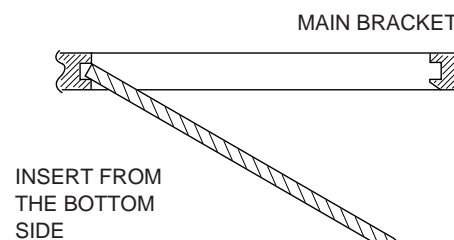


Fig 3

In the event of the plates requiring to be removed at a later stage, this can be achieved by inserting a screwdriver in the snap-recess indicated as in Fig 4 and lifting out.

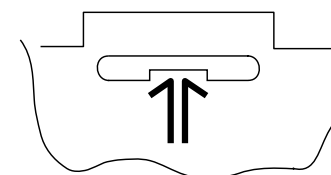


Fig 4

## SECTION 3

### SET - UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to these settings :

● Contrast ..... 80% (or remote control normal)  
 ☆ Brightness ..... 50%

- Carry out the following adjustments in this order :

1. Beam landing
2. Convergence
3. Focus
4. White balance

**Note:** Testing equipment required.

1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

#### Preparation:

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

#### 3-1. BEAM LANDING

1. Input the white signal with the pattern generator.  
 CONTRAST } normal  
 BRIGHTNESS }
2. Set the pattern generator raster signal to red.
3. Move the deflection yoke forward and adjust with the purity control so that the red is at the centre and the blue and the green take up equally sized areas on each side. (See Fig. 3-1 - 3-3)
4. Move the deflection yoke forward and adjust so that the entire screen becomes red. (See Fig. 3-1)
5. Switch the raster signal to blue, then to green and verify the condition.
6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
7. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig. 3-4)

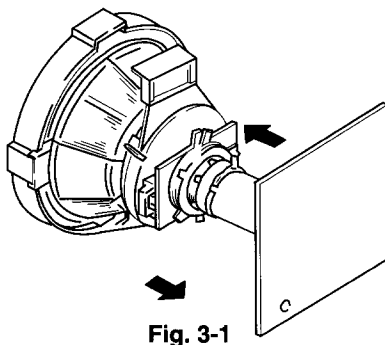


Fig. 3-1

Fig. 3-2

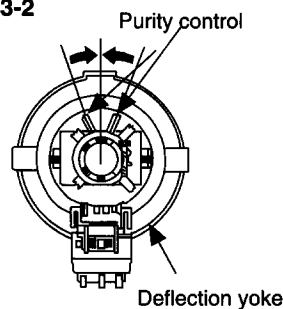


Fig. 3-3

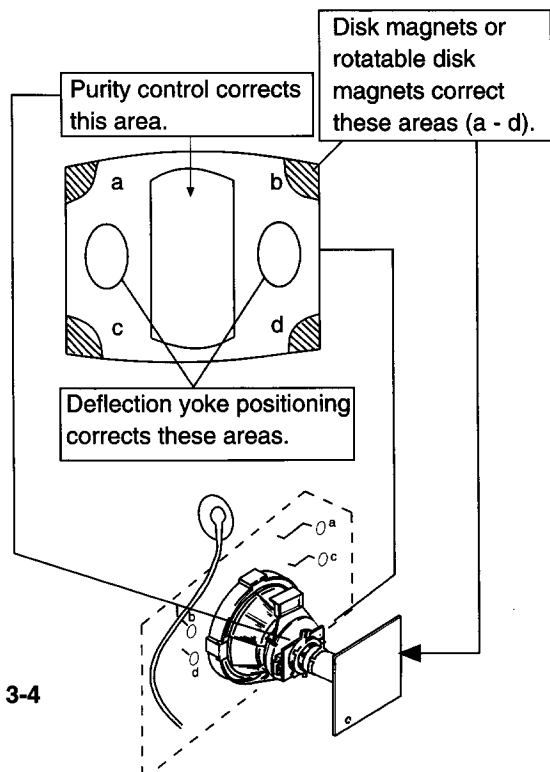
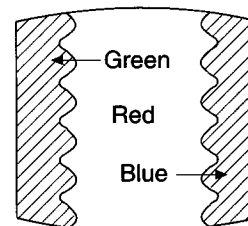


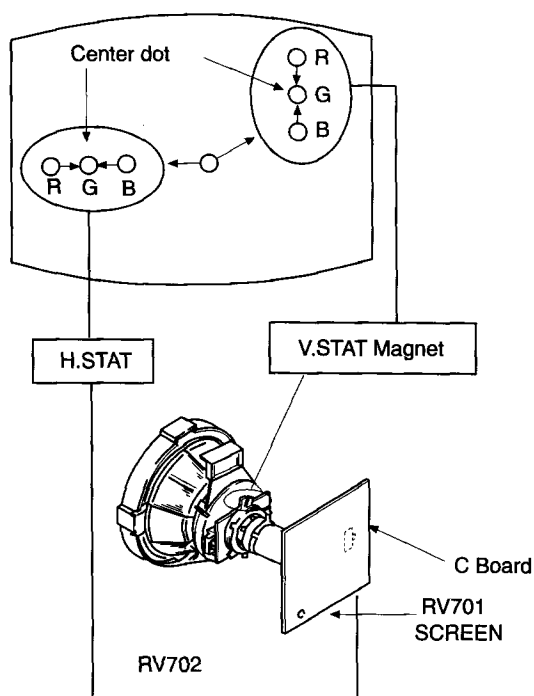
Fig. 3-4

### 3-2. CONVERGENCE

#### Preparation:

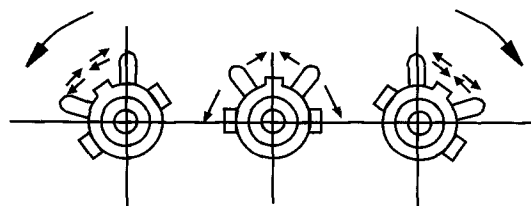
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide a dot pattern.

#### (1) Horizontal and vertical static convergence

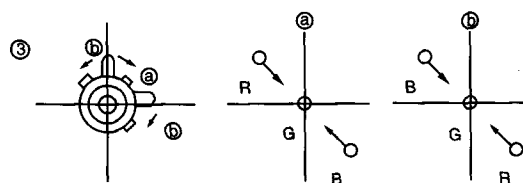
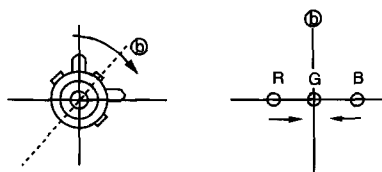
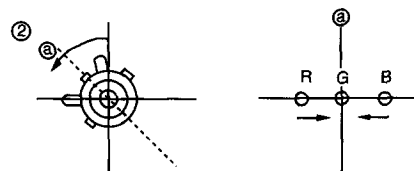
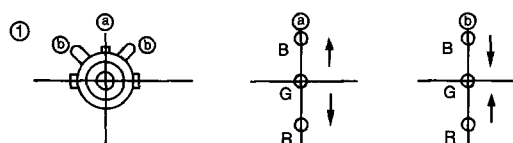


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the centre of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the centre of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the centre of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.  
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

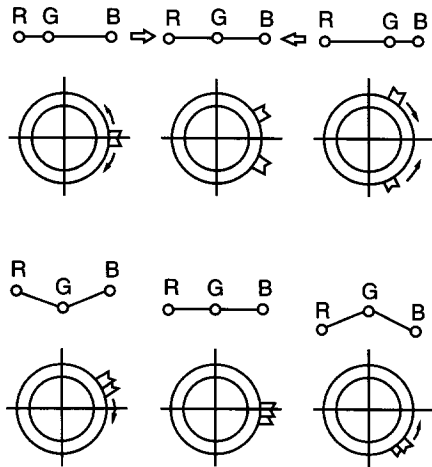
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



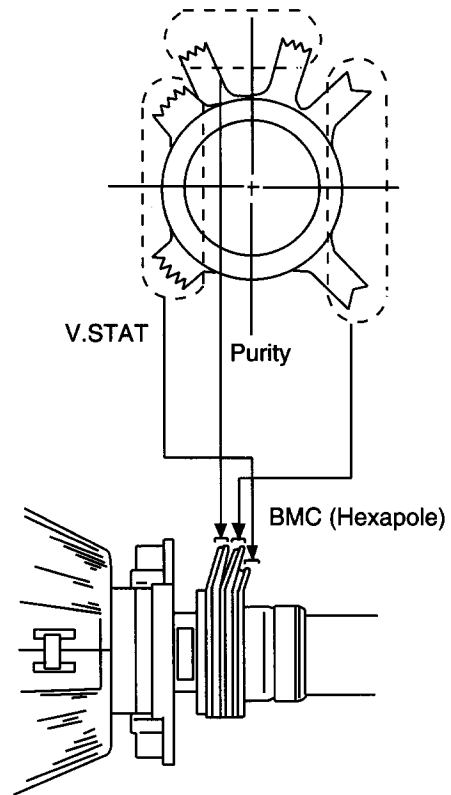
4. If the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the red, green, and blue points move as shown below.



- Operation of BMC (Hexapole) Magnet



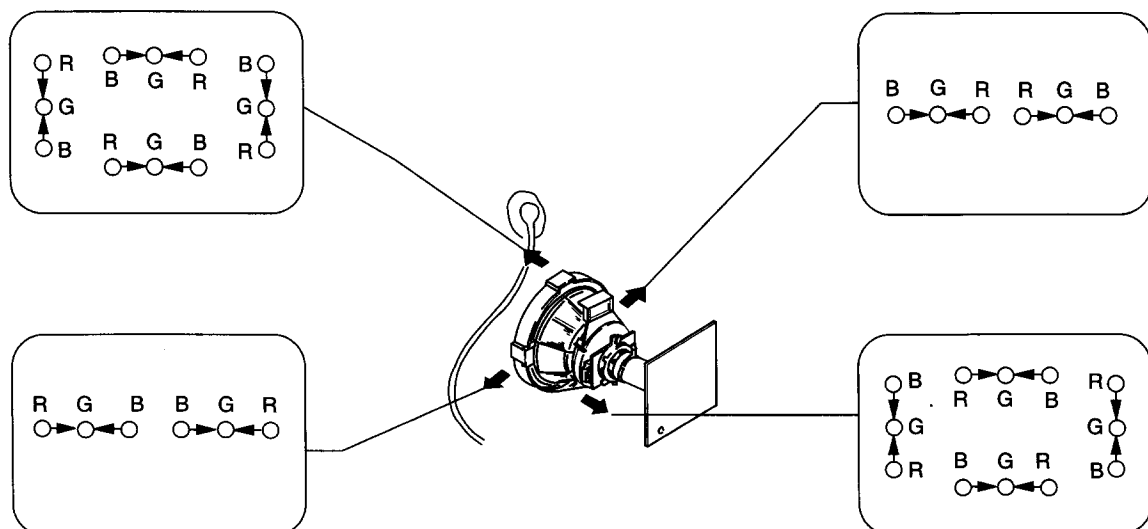
- The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment while tracking.  
Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the centre of the screen (by moving the dots in the horizontal direction).



## (2) Dynamic convergence adjustment.

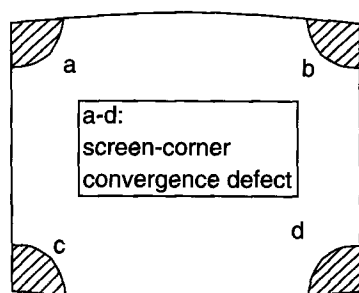
### Preparation:

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
- Slightly loosen the deflection yoke screws.
  - Remove the deflection yoke spacer.
  - Move the deflection yoke as shown in the figure below and optimize the convergence.
  - Tighten the deflection yoke screws.
  - Re-install the deflection yoke spacer.

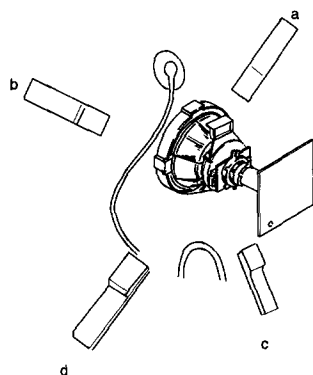


**(3) Screen corner convergence.**

If you are unable to adjust the corner convergence properly, correct them with the use of permalloy assemblies.



Install the permalloy assembly for the section with fault

**3-3. WHITE BALANCE****G2 Setting**

1. Switch the set into AV mode (apply no signal to the AV connectors).
2. Connect a Volt Meter to Test Point 1 on the A board.
3. Adjust RV01 to obtain a voltage of  $3.0V \pm 0.3V$ .

**White balance adjustment**

1. Input an all white signal from the pattern generator.
2. Enter into the service mode.
3. Enter into Picture Adjustment service menu.
4. Select sub-contrast and adjust to 7.
5. Select the Green Drive and adjust so that the white balance becomes optimum.
6. Select the Blue Drive and adjust so that the white balance becomes optimum.
7. Press the TV button to return to TV operation.

**PICTURE ADJUSTMENT**

AFC mode	1
REF position	3
SCP BGR	1
SCP BGF	1
Trap Fo	7
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	5

## SECTION 4

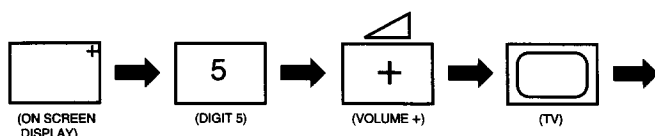
### CIRCUIT ADJUSTMENTS

#### 4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-862.

##### HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set and enter into standby mode.
2. Press the following sequence of buttons on the Remote Commander.



"TT--" will appear in the top right corner of the screen. Other status information will also be displayed.

3. Press MENU on the commander to obtain the following menu on the screen.

TEST MENU
> Picture adjustment
Geometry
Wide
MSP
IC status
Current TV status

4. Move to the corresponding adjustment using the button on the commander.
5. Move the button to the right to enter the selected adjustment.
6. Turn off the power to quit the service mode when adjustments are completed.

##### PICTURE ADJUSTMENT

AFC mode	1
REF position	2
SCP BGR	1
SCP BGF	1
Trap Fo	0
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	3

##### GEOMETRY ADJUSTMENT

V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj

##### WIDE

V Aspect	47
V Scroll	31
Upper V Lin	0
Lower V Lin	0
Left Blanking	1
Right Blanking	11

**MSP**

AGC ON/OFF	ON
Constant gain CDB	0
FM prescale FMP	36
Zwei mono-st WHI	36
Zwei st-mono WLO	18
Zwei mono-bi WMH	36
Zwei bi-mono WLO	18
Time zwei WML	51
Fawct limit	10
Fawct soll init FAW	12
Fawer tol	2
Nicam Err Max CCT	10
Nicam Err Min	0
Nicam Prescale NIP	97
Time Nicam	31
Carrier mute CRM	OFF
Audio clock ACO	HIZ
Scart prescale	25
Scart volume	64

**IC STATUS (CXA2000 / CXA2040)****CXA2000**

H lock	1
IKR	1
VNG	0
X-RAY	0
Colour system	3
CV1 Sync	1

**CXA2040**

Sync sep	1
S1 mode pin	01
S2 mode pin	01

**TUNER**

Tuner status	01101011
--------------	----------

**TV STATUS**

Text system	C TEXT/TV TEXT
Dolby	NO/YES
Text language set	WEST/EAST/RUSSIAN
Menu language set	WEST/EAST/RUSSIAN
Destination	B/D/U/K/L/E/A/R
Scart 16:9	OFF/ON
RGB priority	OFF/ON
Ageing	OFF/ON
Size	28/24
Colour trap sw	SECAM/ALL
Velocity mod	ON/OFF
AFT STATUS	WINDOW/HIGH/LOW

**SUB BRIGHTNESS ADJUSTMENT**

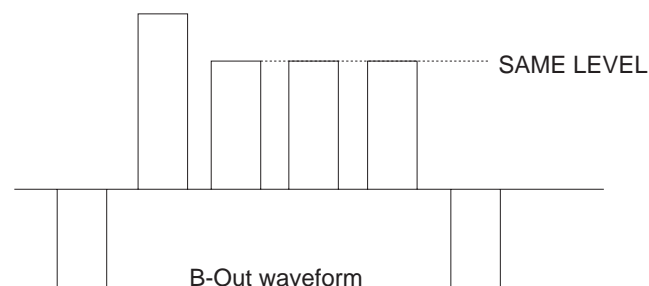
1. Input a Phillips pattern.
2. Set the picture control to minimum.
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the Sub-Brightness data so that there is barely a difference between the 0 IRE and 10 IRE signal.

**SUB CONTRAST ADJUSTMENT**

1. Input a video that contains a small 100% area on a black background.
2. Set the picture control to maximum.
3. Connect an oscilloscope to pin 3 of CN301 (A board).
4. Enter into the Picture Adjustment Service Menu.
5. Adjust the Sub-contrast data to obtain a black to white amplitude of 2.50 volts.

**SUB COLOUR ADJUSTMENT**

1. Receive a PAL Colour Bar video signal.
2. Connect an oscilloscope to pin 3 of CN301 (A board).
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the sub colour data so that cyan, magenta and blue colour bars are of equal height.



NOTE: The data shown in the TV STATUS table is dependant on destination, screen size and country.

**SYSTEM B/G, D/K, I & L I.F ADJUSTMENT**

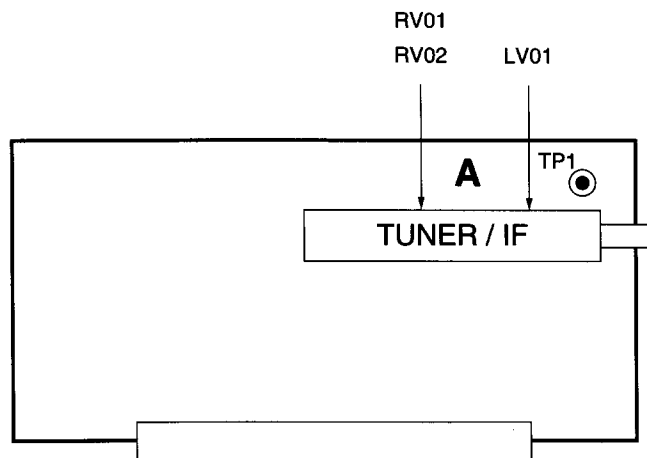
1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 " ) to fix the I.F frequency to 38.9 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the I.F coil (LV01) until the "AFT Status" indicates a " Window " condition.

**SYSTEM L BAND 1 I.F ADJUSTMENT**

1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 " ) to fix the I.F frequency to 34.2 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the RV02 until the "AFT Status" indicates a " Window " condition.

**TUNER AGC ADJUSTMENT**

1. Receive a signal of 63dBuV / 75 ohm terminated via the tuner socket.
2. Measure the voltage at test point 1 (A board).
3. Adjust RV01 to obtain a voltage of  $3.0V \pm 0.3V$ .



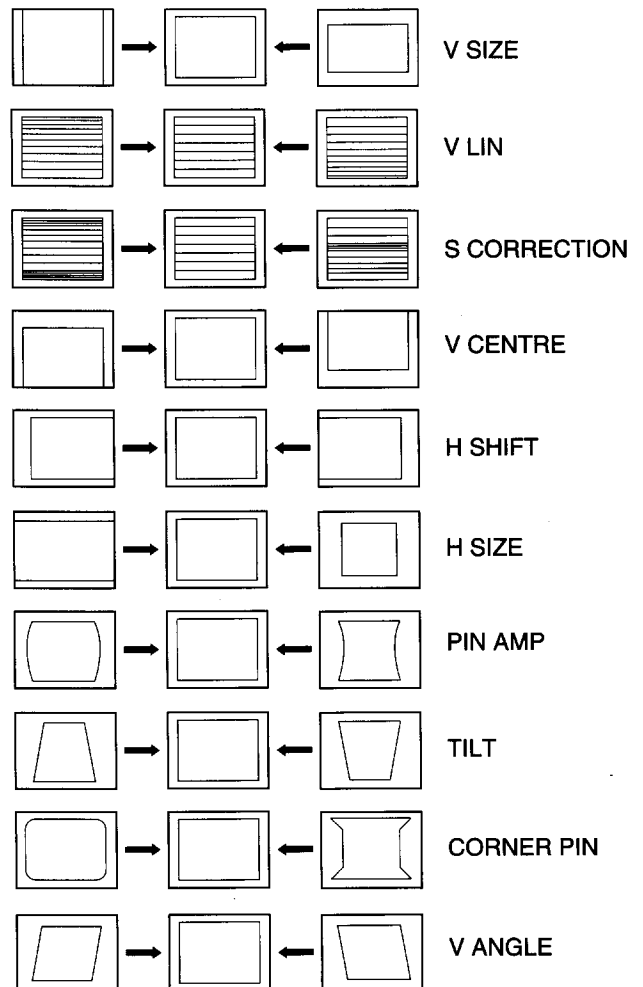
- A Board component side -

**DEFLECTION SYSTEM ADJUSTMENT**

1. Enter into the Geometry Adjustment Service Menu.
2. Select and adjust each item in order to obtain the optimum image.

**GEOMETRY ADJUSTMENT**

V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj



## 4-2. TEST MODE 2:

Is available by pressing Test button twice, OSD " TT " appears. The functions described below are available by pressing the two numbers. To release the Test mode 2, press 0 twice, or switch the TV into stand-by mode.

00	Switch test mode 2 off	46	IR channel presetting mode. The channel presetting can be done by a special IR transmitter (dealer commander.)
01	Picture maximum.	47	Reset NVM testbyte.
02	Picture minimum.	48	Set NVM testbyte to 44h.
03	Volume 35%	49	Erase the NVM test byte (This byte detects already stored NVM's). After selecting this function, switch TV off and on, the NVM will be preset by the micro controller.
04-05	Dummy	50	Tenth entry is deleted.
06	Volume 80%	51	Text interlace ODD.
07	Set ageing Condition (Volume min., Picture max., Brightness max)	52	Text interlace EVEN.
08	Shipping Condition (Analog Values are RESET due to factory setting, Prog 1 is selected, TT mode is switched off.)	53	Auto picture on.
09	'Menu' Flag reset	54	Auto picture off.
10	Tenth entry is deleted.	55	Auto cutoff enable.
11-12	Dummy	56	Auto cutoff disable.
13	Forced AV 16:9 detection on/off	57-58	Dummy
14	Display TV configuration	59	Lock to centre frequency.
15	Read factory setting from NVM, reads Volume, Balance, Treble, Bass, Brightness, Contrast, Hue, Sharpness, Colour values from ROM to the actual used values (Last power memory).	60	Tenth entry is deleted.
16	Dummy	61	Turn on Dolby Prologic mode.
17	Preset label for AV Sources.	62	White noise to left speaker.
18	RGB Priority on/off.	63	White noise to right speaker.
19	Clear all preset labels.	64	White noise to centre speaker.
20	Tenth entry is deleted.	65	White noise to surround speaker.
21	Sub Contrast.	66	Set standard stereo mode.
22	Sub Colour.	67	Set prologic normal mode.
23	Sub Brightness.	68	Set prologic wide mode.
24	Set destination = U RGB Priority = off.	69	Set prologic phantom mode.
25	Set destination = D RGB Priority = off.	70	Tenth entry is deleted.
26	Set destination = B RGB Priority = on.	71	Lumisponder mode 1
27	Set destination = K RGB Priority = off.	72	Lumisponder mode 2
28	Set destination = L RGB Priority = off.	73	Lumisponder off
29	Set destination = E RGB Priority = off.	74	Text centre adjustment
30	Tenth entry is deleted.	75	Reset picture settings
31	Set destination = A RGB Priority = on.	76	Dummy
32	Set destination = R	77	Reset sound settings
33-35	Dummy	78-79	Dummy
36	Rotation coil test	80	Tenth entry is deleted.
37	Select 25" chassis	81	VM on.
38	Select 25" chassis	82	VM off.
39	Trap SW select	83	Set picture blanking lever delay 40ms.
40	Tenth entry is deleted.	84	Set picture blanking lever delay 80ms.
41	Re-initialise NVM.	85	Set picture blanking lever delay 160ms.
42	Default program into NVM.	86-89	Dummy.
43	Initialise CXA2000 settings.	90	Tenth entry is deleted.
44	Initialise all favorite pages to be 100.	91-99	Dummy.
45	Channel locks off.		

**Note :** In Test Mode the Menu display is switchable by the speaker mute (off) button.

### 4-3. BE-3D SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-3D chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to IIC. In the event of one of these situations arising the software will first try to release the bus if busy (Failure to do so will report with continuous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the led (Series of flashes which must be counted) See Table 1, non fatal errors are reported with this method.

**Table 1**

ERROR	LED ERROR COUNT
Protection circuit trip < ANY TIME >	02
IIC SCL LOW < POWER UP ONLY >	03
IIC SDA LOW < POWER UP ONLY >	04
IIC SDA & SCL LOW < POWER UP ONLY >	05
Jungle/Chroma controller no acknowledge < POWER UP ONLY >	06
Video Switch no acknowledge < POWER UP ONLY >	07
Tuner no acknowledge	08
MSP no acknowledge	09
NVM no acknowledge	10
M3L TXD LOW < POWER UP ONLY >	11
M3L RXD LOW < POWER UP ONLY >	12
M3L ENABLE LOW < POWER UP ONLY >	13
M3L TXD & RXD LOW < POWER UP ONLY >	14
Compact Text test fail < POWER UP ONLY >	15
AV switch cannot power on reset	16
Cannot initialise jungle	17
NVM acknowledge fail after initialisation	18
Multiple devices with no acknowledge < POWER UP ONLY >	19
Compacttext run-time failure	20
AVSWITCH response failure after power up	21
JUNGLE/CHROMA controller response failure after power up	22
CompactText does not respond	23

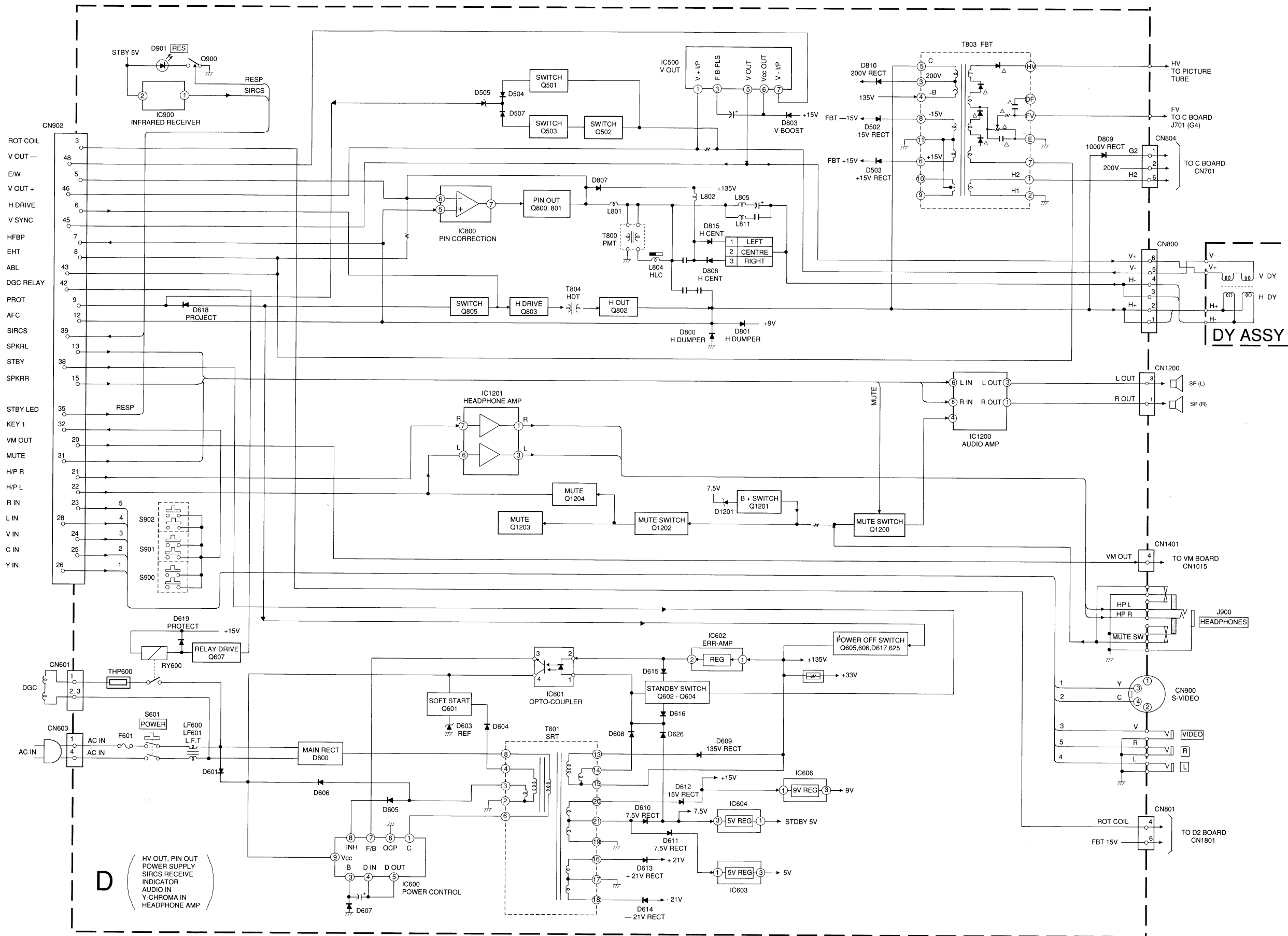
Flash Timing Example : e.g. error number 3.

Stby LED

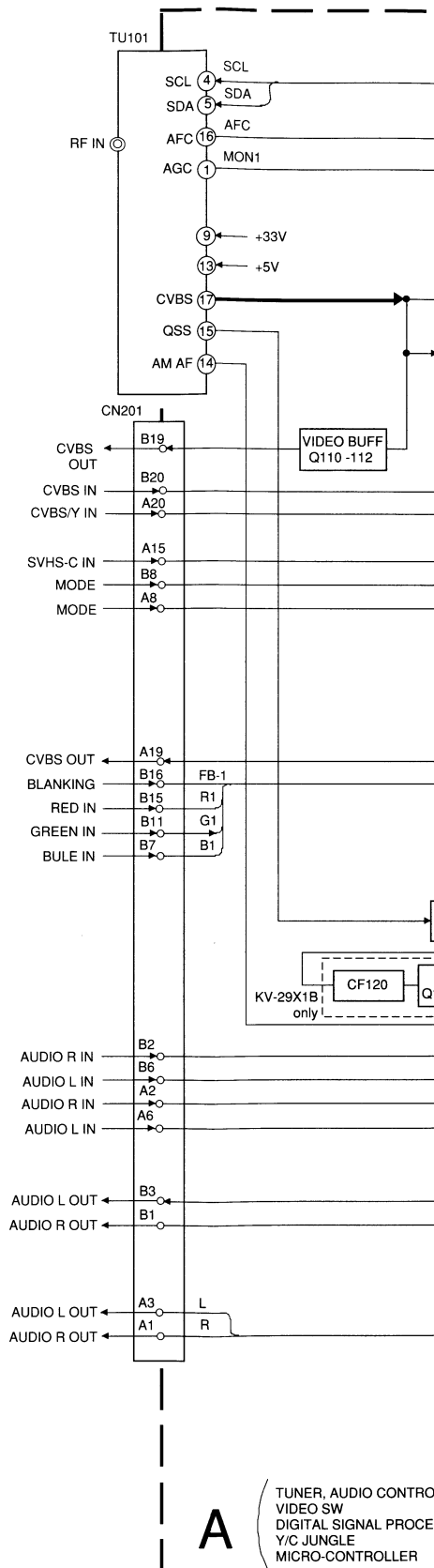


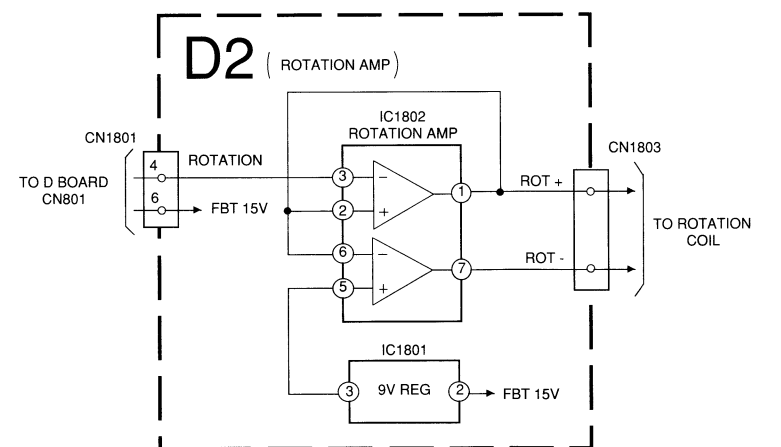
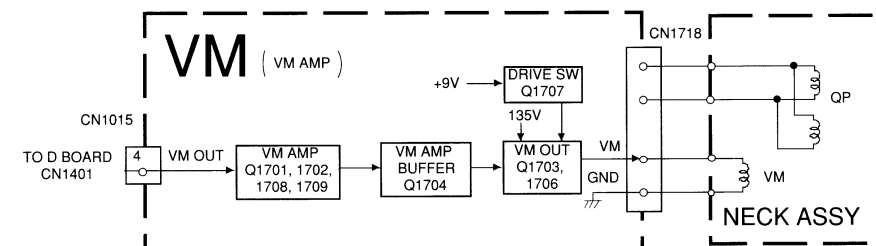
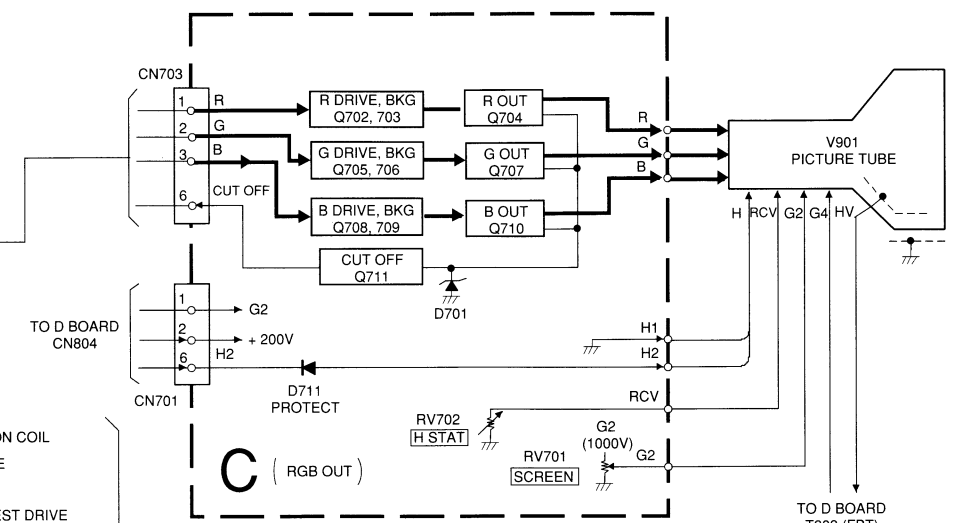
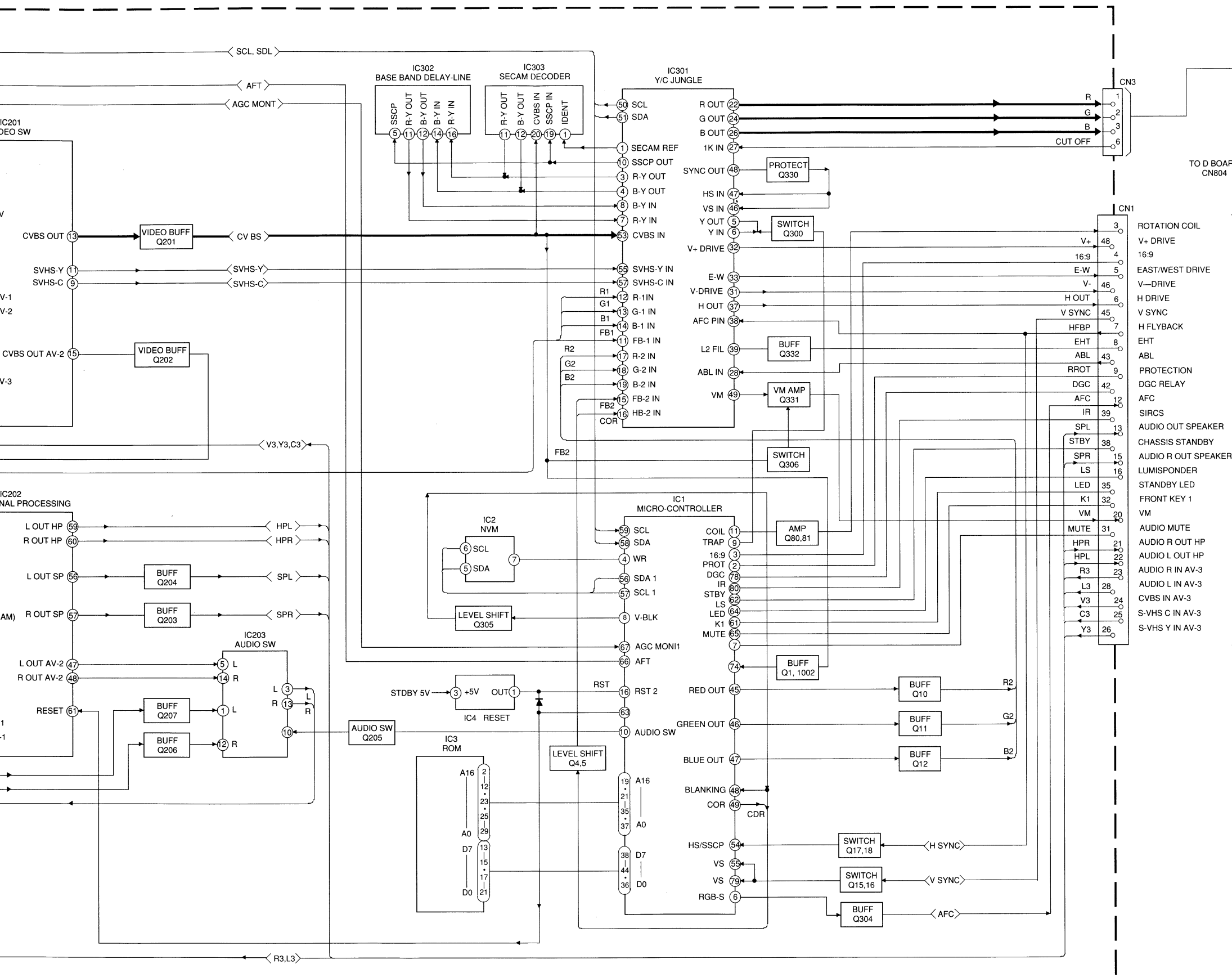
## SECTION 5 DIAGRAMS

### 5-1. BLOCK DIAGRAM (1)



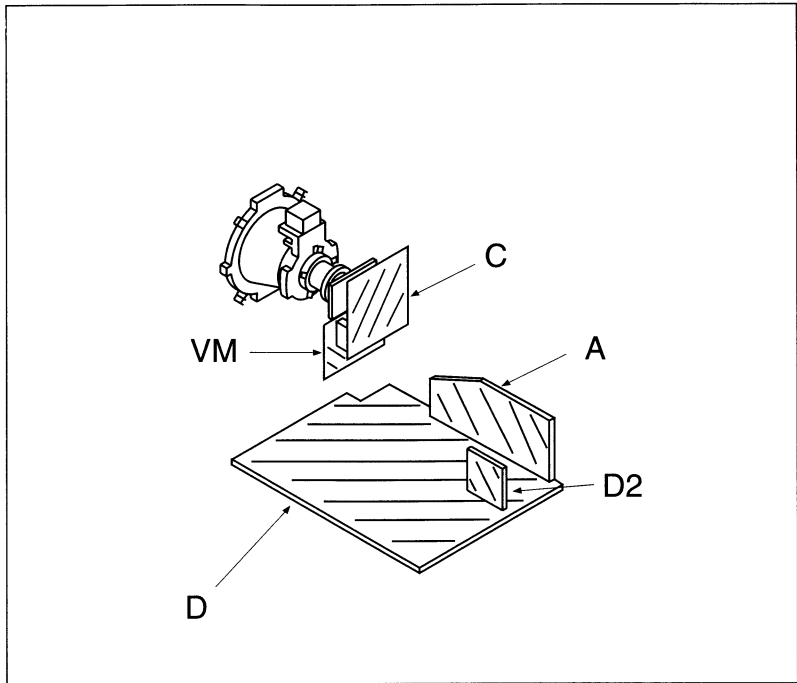
### BLOCK DIAGRAM (







### 5-2. CIRCUIT BOARDS LOCATION



### 5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

**Note :**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$  50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.  
 $k = 1000$  ,  $M = 1000K$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm  
Rating electrical power  $\frac{1}{4}$  W

- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- $\perp$  : earth - ground.
- $\text{///}$  : earth - chassis.
- $\#$  : no mounted.

**Note :** The components identified by shading and marked are critical for safety. Replace only with the part number specified.

**Note :** Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

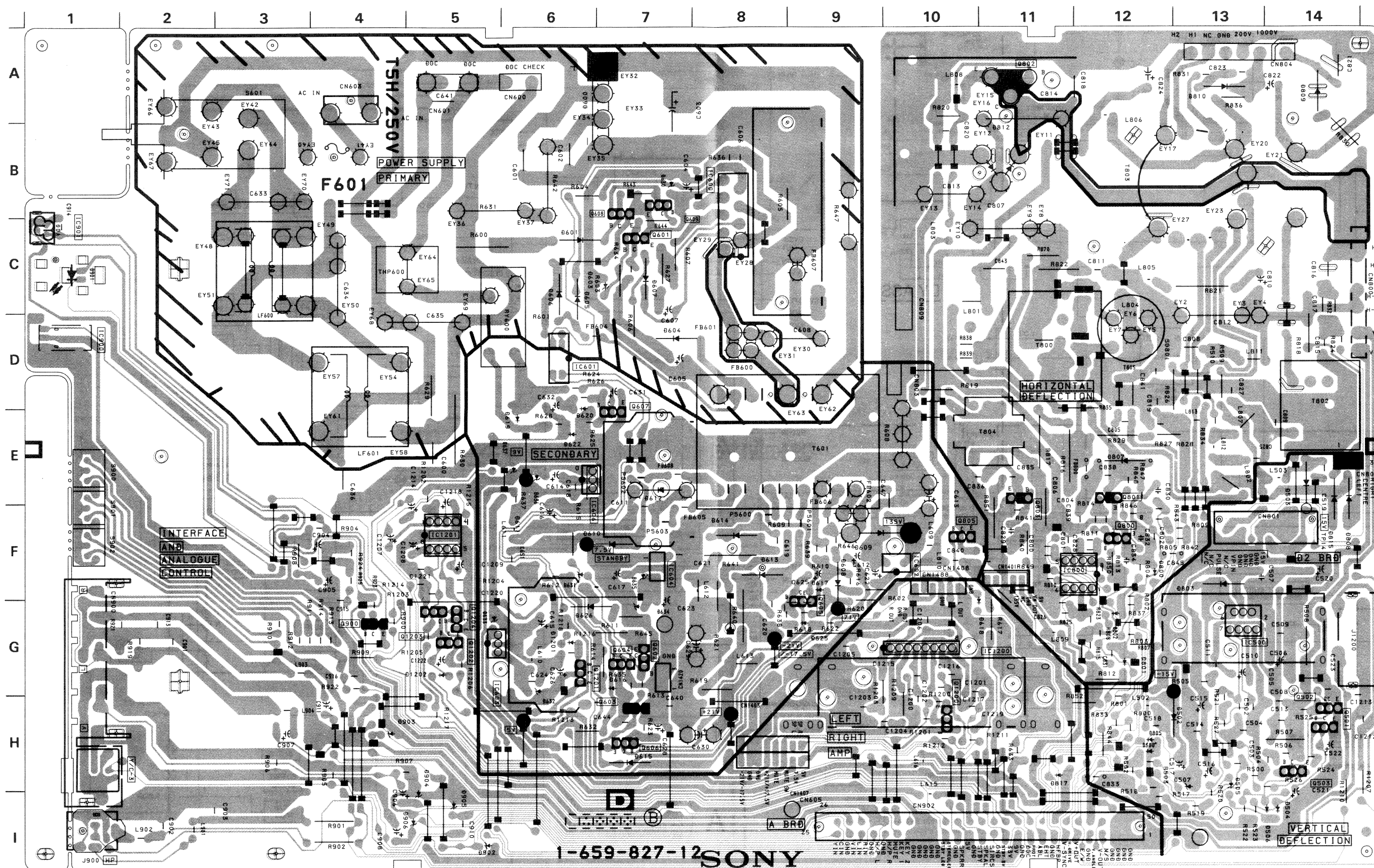
**Reference information**

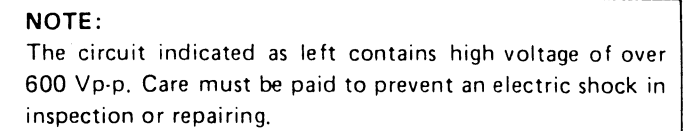
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: $\times$	ADJUSTABLE RESISTOR
	: LF-8L	MICRO INDUCTOR
	: TA	TANTALUM
CAPACITOR	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M $\Omega$  digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- : B+ bus.
- : signal path. (RF)

**D** [ HV OUT, PIN OUT, POWER SUPPLY, CONTROL SW, AUDIO IN  
Y-CHROMA IN, HEADPHONE IN, SIRCS RECEIVE, INDICATON ]

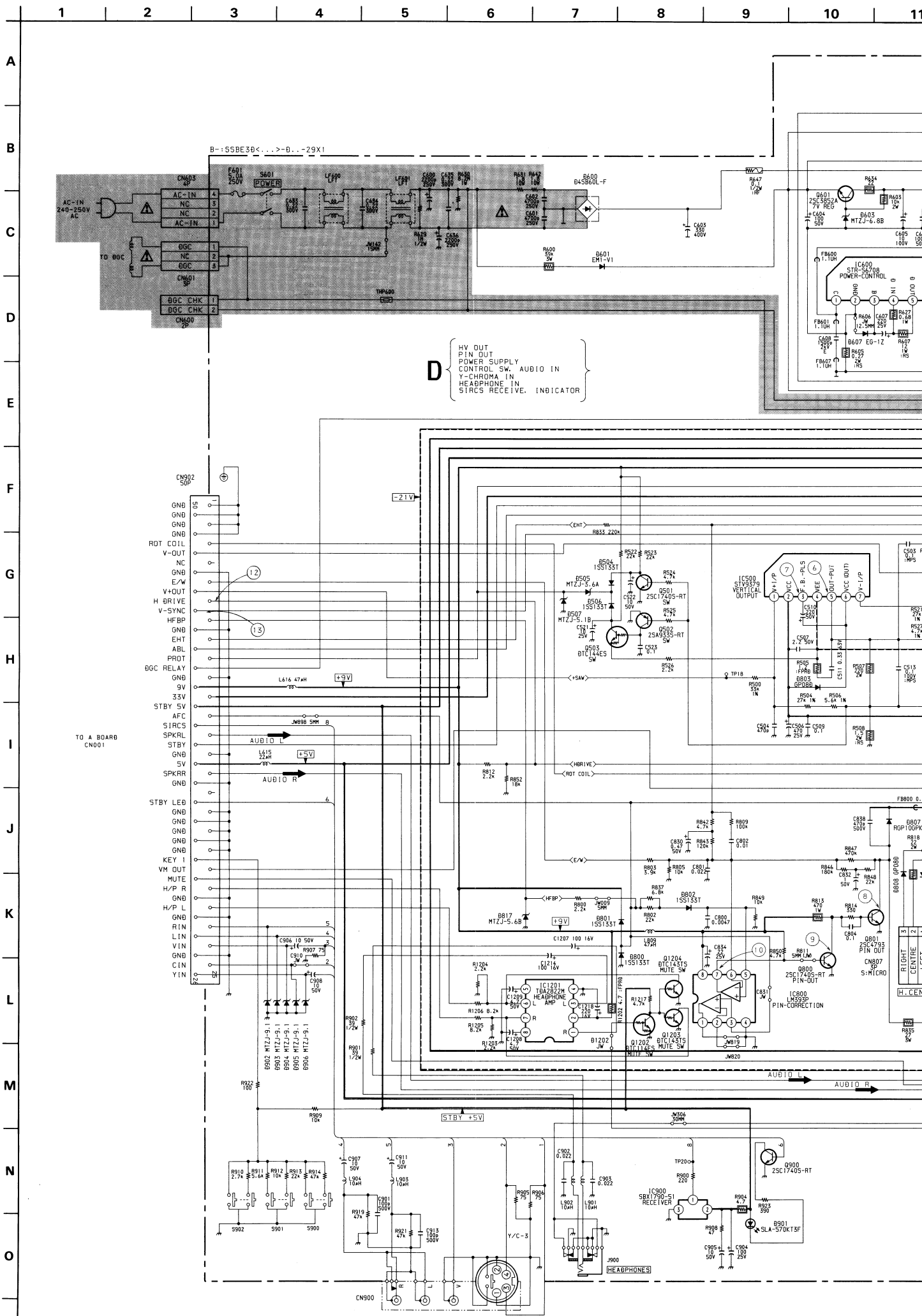
**D Board**

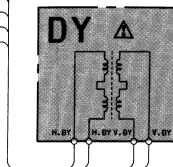
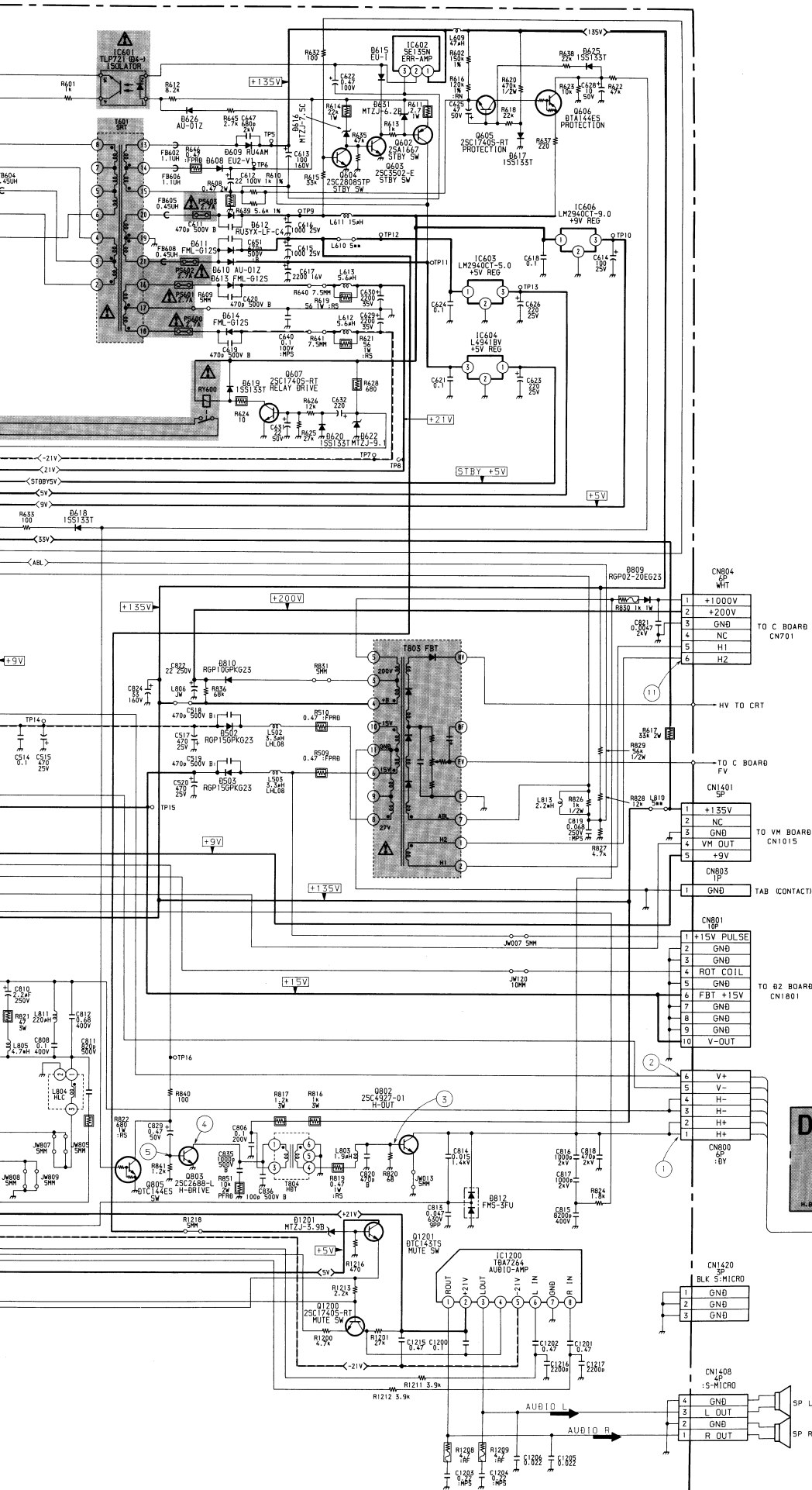




IC		DIODE	
IC500	G-13	D600	A-7
IC600	B-8	D601	C-6
IC601	D-6	D603	C-7
IC602	F-10	D604	D-7
IC603	G-5	D605	C-6
IC604	F-7	D606	C-6
IC606	E-6	D607	C-7
IC800	F-12	D608	F-9
IC900	D-1	D609	F-9
IC1200	G-10	D610	F-7
IC1201	F-5	D611	F-6
		D612	E-7
TRANSISTOR		D613	F-8
Q501	H-14	D614	F-8
Q502	H-14	D615	H-7
Q503	H-14	D616	G-7
Q601	C-7	D617	F-9
Q602	G-7	D618	F-11
Q603	H-7	D619	E-6
Q604	G-7	D620	E-6
Q605	F-9	D622	E-6
Q606	H-7	D625	G-9
Q607	D-7	D626	G-6
Q800	F-12	D631	F-6
Q801	E-12	D800	F-12
Q802	A-11	D801	G-12
Q803	E-11	D802	G-12
Q805	F-10	D803	F-13
Q900	G-4	D807	E-12
Q1200	H-10	D808	E-14
Q1201	G-6	D809	A-14
Q1202	G-5	D810	A-13
Q1203	G-5	D812	B-11
Q1204	G-5	D815	E-14
DIODE		D817	H-11
D500	H-12	D901	C-1
D502	H-13	D902	I-5
D503	I-14	D903	H-4
D504	H-11	D904	H-5
D505	H-13	D905	I-5
D506	I-14	D906	I-5
D507	H-13	D1201	G-6

IC		DIODE	
IC500	G-13	D600	A-7
IC600	B-8	D601	C-6
IC601	D-6	D603	C-7
IC602	F-10	D604	D-7
IC603	G-5	D605	C-6
IC604	F-7	D606	C-6
IC606	E-6	D607	C-7
IC800	F-12	D608	F-9
IC900	D-1	D609	F-9
IC1200	G-10	D610	F-7
IC1201	F-5	D611	F-6
		D612	E-7
TRANSISTOR		D613	F-8
Q501	H-14	D614	F-8
Q502	H-14	D615	H-7
Q503	H-14	D616	G-7
Q601	C-7	D617	F-9
Q602	G-7	D618	F-11
Q603	H-7	D619	E-6
Q604	G-7	D620	E-6
Q605	F-9	D622	E-6
Q606	H-7	D625	G-9
Q607	D-7	D626	G-6
Q800	F-12	D631	F-6
Q801	E-12	D800	F-12
Q802	A-11	D801	G-12
Q803	E-11	D802	G-12
Q805	F-10	D803	F-13
Q900	G-4	D807	E-12
Q1200	H-10	D808	E-14
Q1201	G-6	D809	A-14
Q1202	G-5	D810	A-13
Q1203	G-5	D812	B-11
Q1204	G-5	D815	E-14
DIODE		D817	H-11
D500	H-12	D901	C-1
D502	H-13	D902	I-5
D503	I-14	D903	H-4
D504	H-11	D904	H-5
D505	H-13	D905	I-5
D506	I-14	D906	I-5
D507	H-13	D1201	G-6



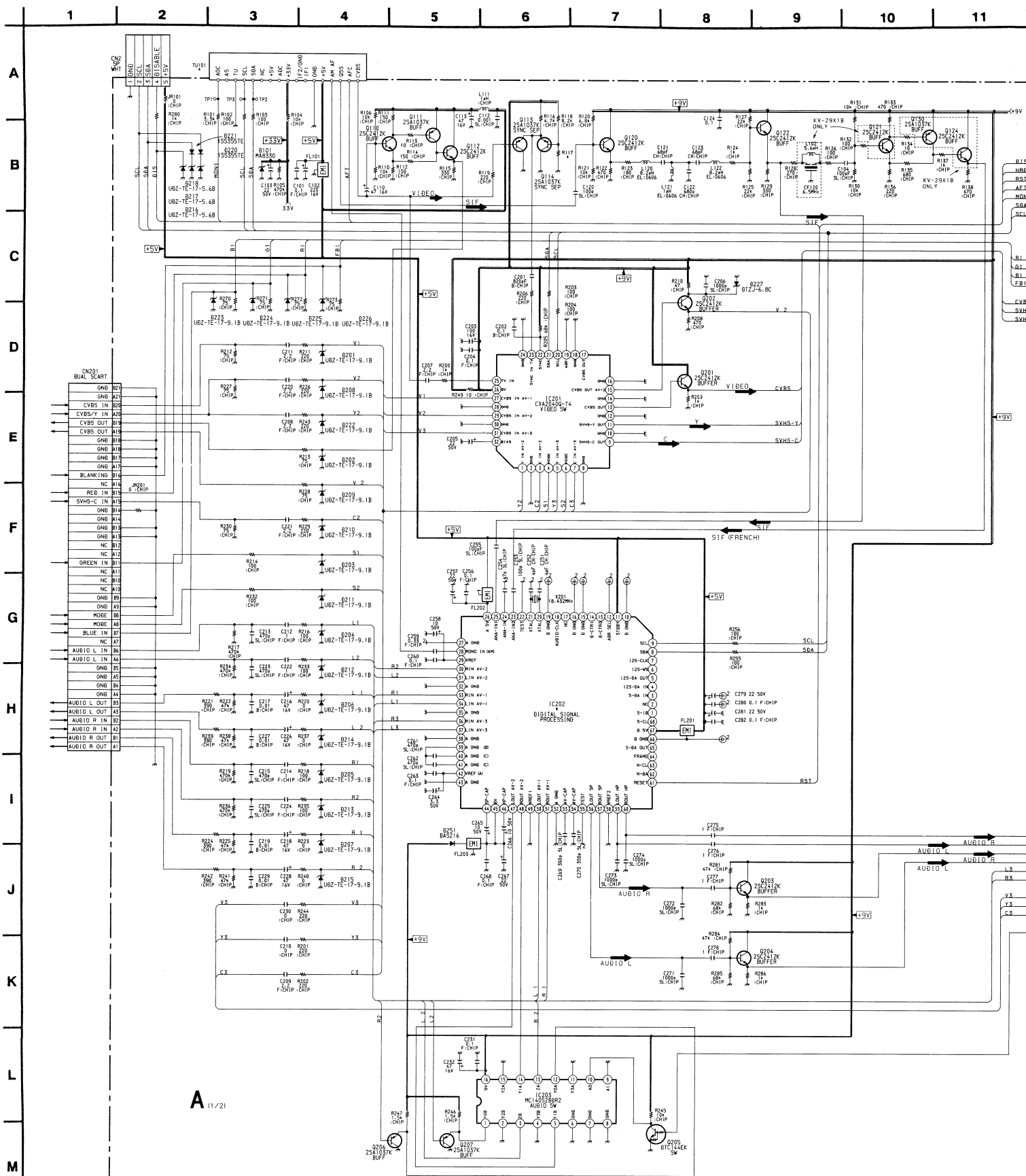


D BOARD  
TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q501	-0.1	0.2	-
Q502	0.1	-5.8	-
Q503	-5.8	-12.0	-12.0
Q602	72.0	7.5	72.7
Q603	0	72.0	-
Q604	0.7	-	-
Q605	0.5	-	0.3
Q606	-	-	12.0
Q607	-	12.0	-
Q800	0.2	3.1	-
Q801	0.3	17.0	-
Q802	-0.2	143.3	-
Q803	-0.6	99.8	-
Q805	-	3.6	-
Q900	-	5.4	-
Q1200	2.9	21.5	4.6
Q1201	3.4	5.0	3.0
Q1202	2.8	-	-

D BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC500	1	1.5
	2	15.0
	3	-12.3
	4	-14.0
	5	0.1
	6	15.2
	7	1.4
IC600	1	170.0
	2	-62.4
	3	-62.6
	4	-62.2
	5	-62.0
	6	-62.6
	7	-62.4
	8	-62.0
	9	-58.0
IC601	1	64.3
	2	63.0
	3	-62.5
	4	-58.6
IC602	1	135.0
	2	63.2
	3	-0.1
IC800	3	0.9
	5	1.5
	6	2.0
	7	0.2
	8	9.0
IC1200	2	21.7
	4	21.5
	5	-21.7
IC1201	1	4.0
	2	9.0
	3	4.0
	5	0.5
	8	0.5

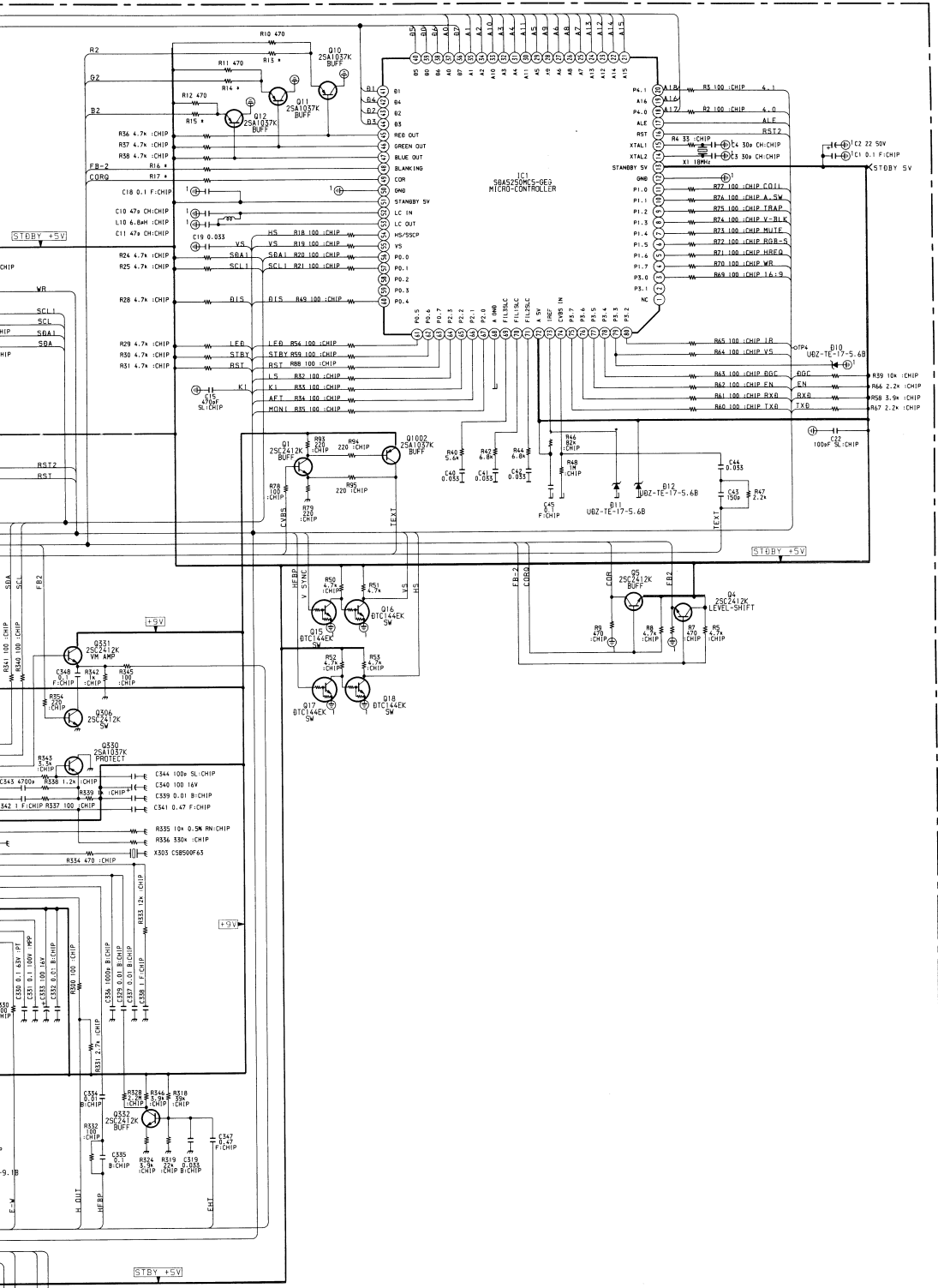


B-:SSBESD<...>A...-29X1

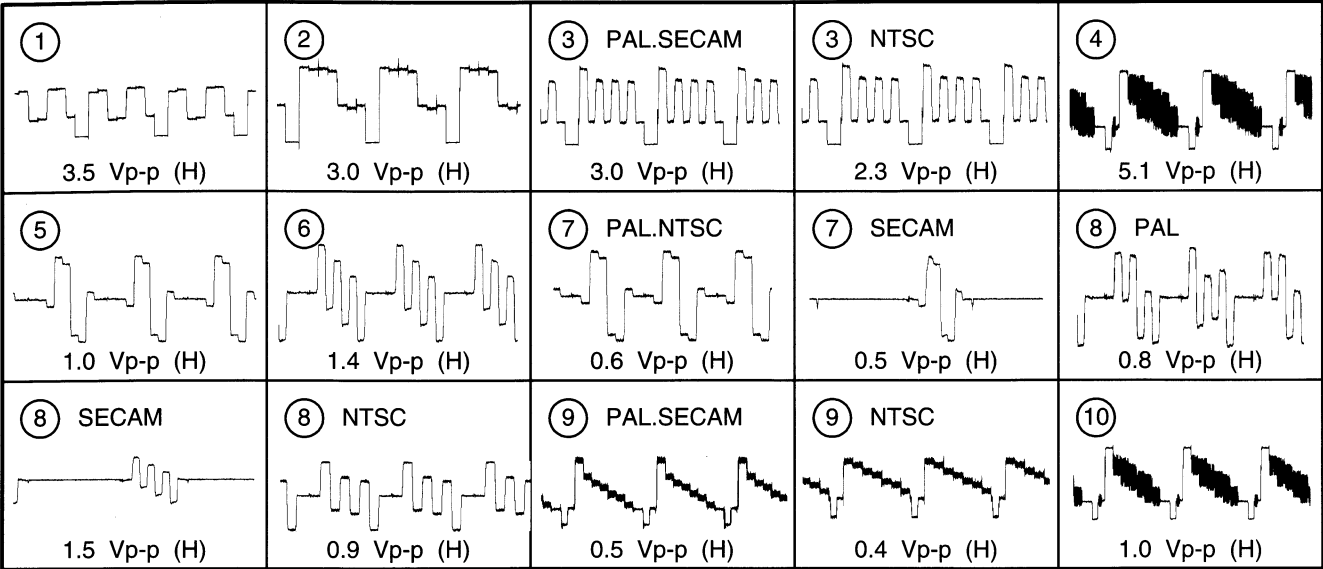
### A BOARD \* MARK

Model	29X1A	29X1B	29X1D	29X1E	29X1K	29X1L	29X1R	29X1U
Ref. No.								
C370	—	2.2UF	2.2UF	2.2UF	2.2UF	—	2.2UF	—
C372	—	0.1UF	0.1UF	0.1UF	0.1UF	—	0.1UF	—
C373	—	0.22UF	0.22UF	0.22UF	0.22UF	—	0.22UF	—
D370	—	BAS216	BAS216	BAS216	BAS216	—	BAS216	—
IC3	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBW101	TMS27PC010A-15FMBW101	TMS27PC010A-15FMBW101
IC202	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15
IC303	—	TDA8395T	TDA8395T	TDA8395T	TDA8395T	—	TDA8395T	—
R13	150	—	150	150	150	150	150	150
R14	150	—	150	150	150	150	150	150
R15	150	—	150	150	150	150	150	150
R16	100	—	100	100	100	100	100	100
R17	100	—	100	100	100	100	100	100
R117	1.8K	1.8K	1.8K	1.8K	1.8K	1.8K	1.8K	2.0K
TU101	TUVIF (AEP)	TUVIF (FR)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (UK)





WAVEFORMS A BOARD



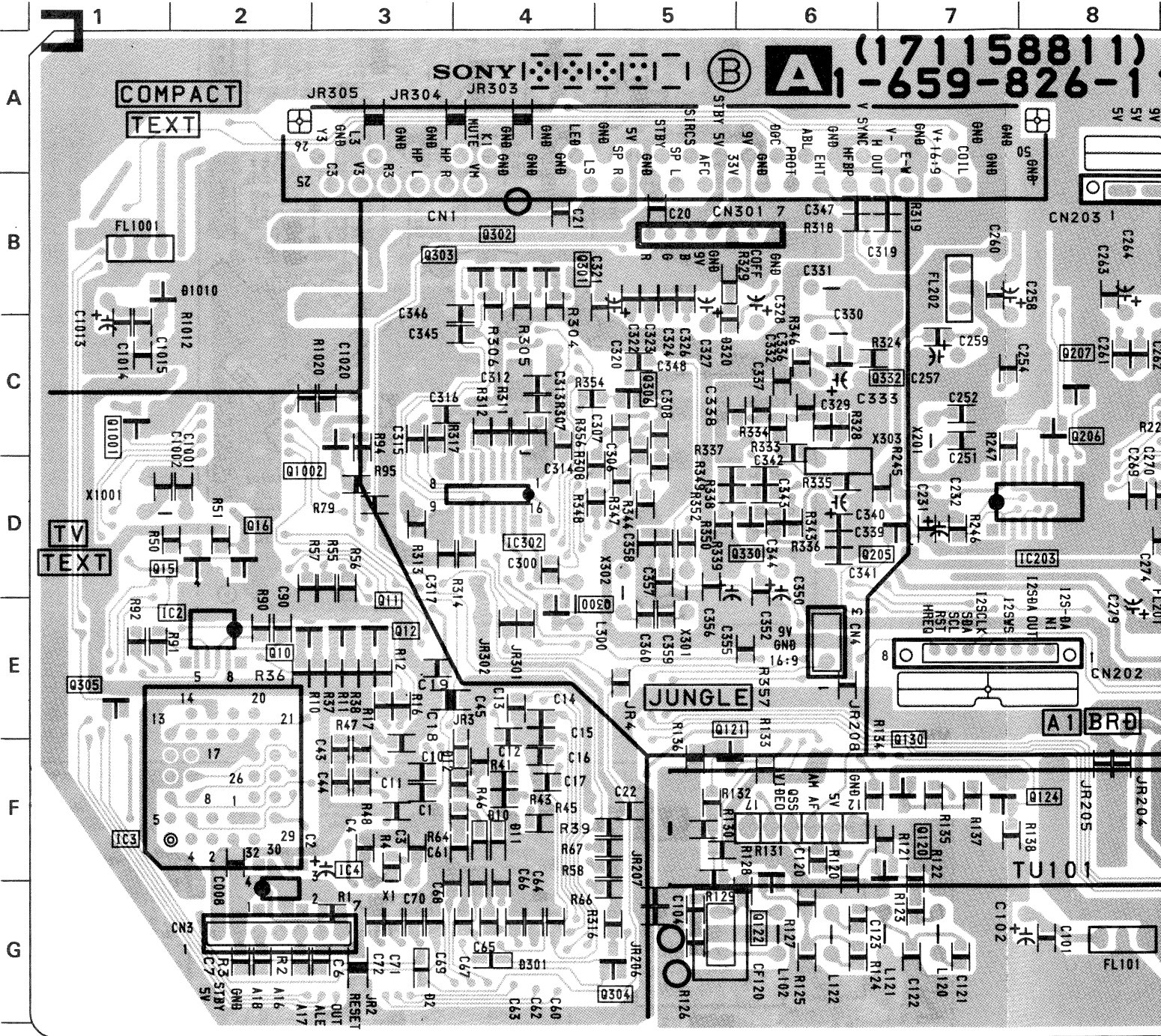
A (2/2) BOARD IC VOLTAGE TABLE

IC Voltage Table								
Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC1	2	3.6	IC301	5	3.6	IC301	61	5.0
	3-4	4.8		6	5.0		62	7.6
	5	0.5		7-8	5.4		1	4.8
	7	4.8		10	0.6		5	0.7
	9	4.8		12-14	5.4		9	4.8
	11	2.4		16	4.0		11-12	3.0
	13	4.8		17-19	5.4		14	1.3
	14-15	2.3		20	8.8		16	1.3
	16-17	4.8		22-23	2.2		5	8.0
	48	4.0		24	2.0		3-2	10
	51	4.8		25	2.4		11	5.6
	52-53	2.4		26	2.0		0	19
	54	0.7		27	4.0		20	3.7
	55	0.2		28	6.6		4	0.2
	56-57	4.8		29	8.8		5	0.7
	58	2.8		31-33	3.0		4	0.2
	59	3.5		34	4.0		5	0.7
	60	2.4		35	4.6		6	1.7
	62	0.7		36	8.8		7	1.8
	63	4.4		37	3.1		10	0.4
	65	4.8		38	3.4		11-12	4.8
IC2	66	2.1		39	5.3	IC303	16	4.8
	67	2.0		40	4.2		17	0
	69-71	2.3		41	2.3		21	4.8
	72	4.8		43	1.7		23	3.0
	73	1.5		44	8.8		25	4.8
	74	1.2		45	2.5		56	0
	75-77	4.8		46	3.9		61	1.3
	79	0.2		47	3.0		62-63	1.4
	80	4.8		48	4.4		64	0
				49	6.3		66	4.6
IC3	5-8	4.8		50-51	0.1	IC1001	67	4.7
	31-32	4.8		53	3.9		68	4.0
IC4	1	4.8		54	5.0			
	3	4.8		55-56	4.2			
IC301	1	1.5		58-59	8.8			
	3-4	5.6		60	5.3			

A

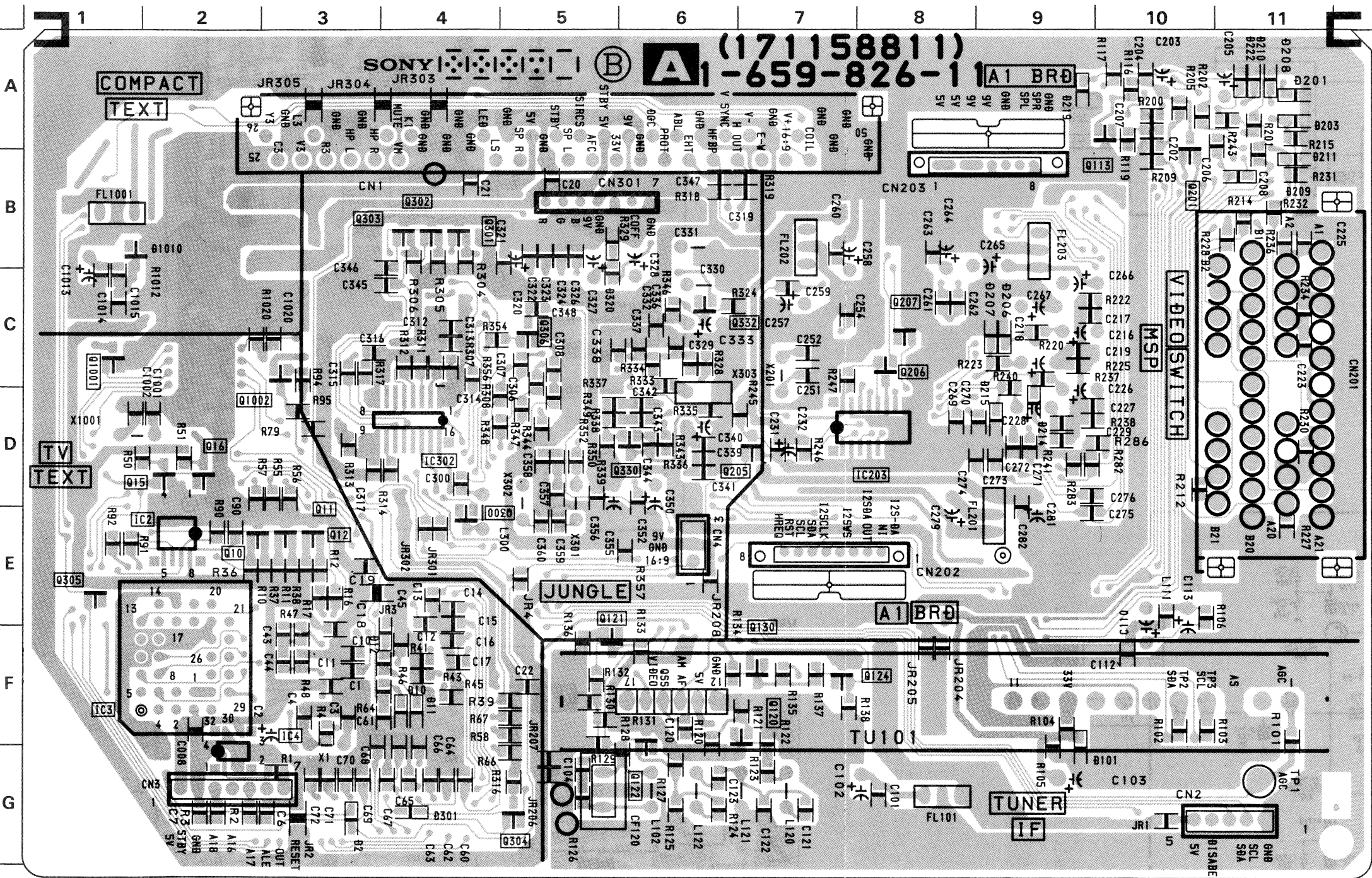
TUNER, AUDIO CONTROL VIDEO SW, DIGITAL SIGNAL PROCESSING  
Y/C JUNGLE MICRO CONTROLLER

A Board <Conductor Side>

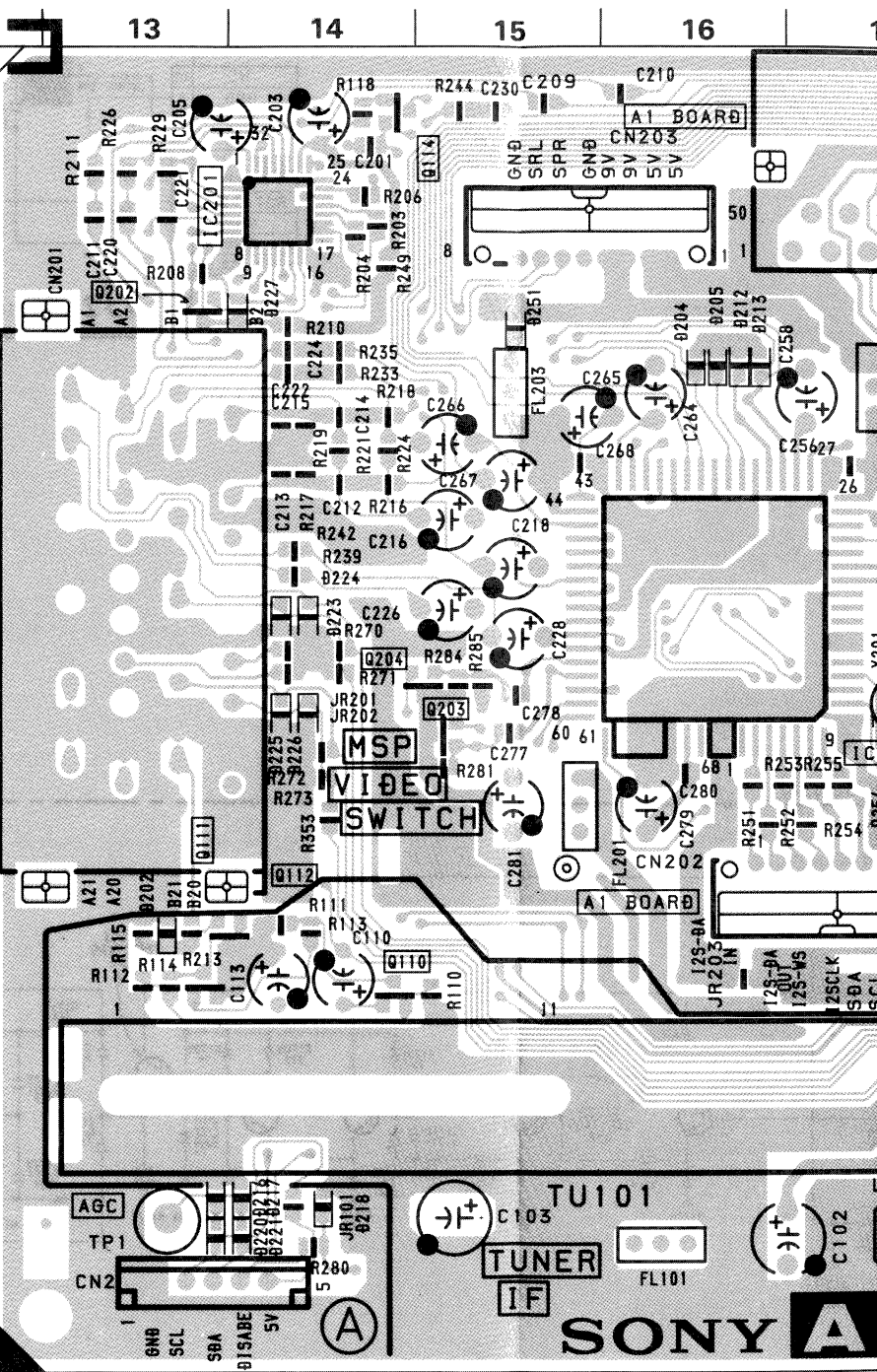


**A** [ TUNER, AUDIO CONTROL VIDEO SW, DIGITAL SIGNAL PROCESSING ]  
[ Y/C JUNGLE MICRO CONTROLLER ]

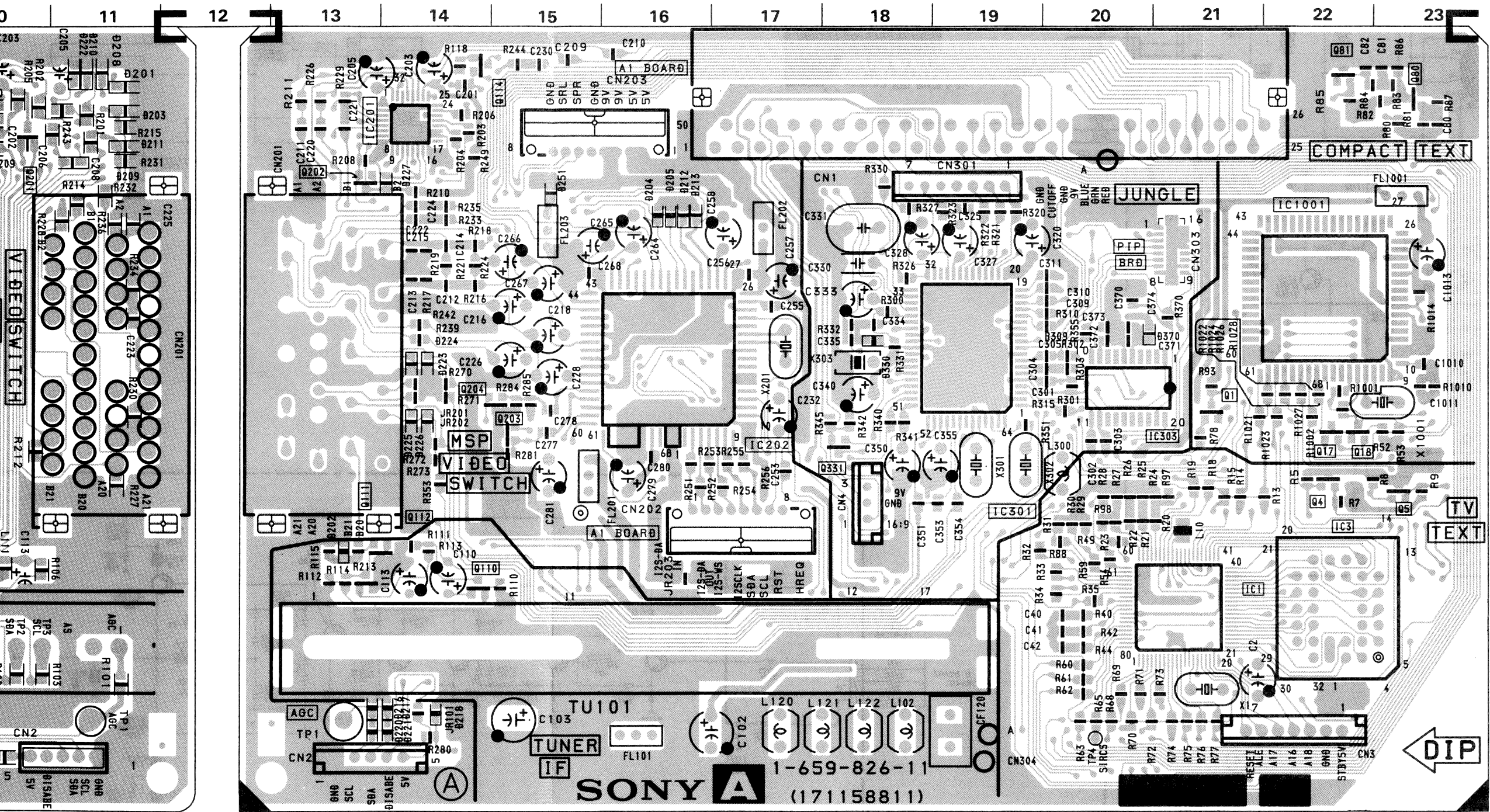
A Board <Conductor Side>



A Board <Component Side>

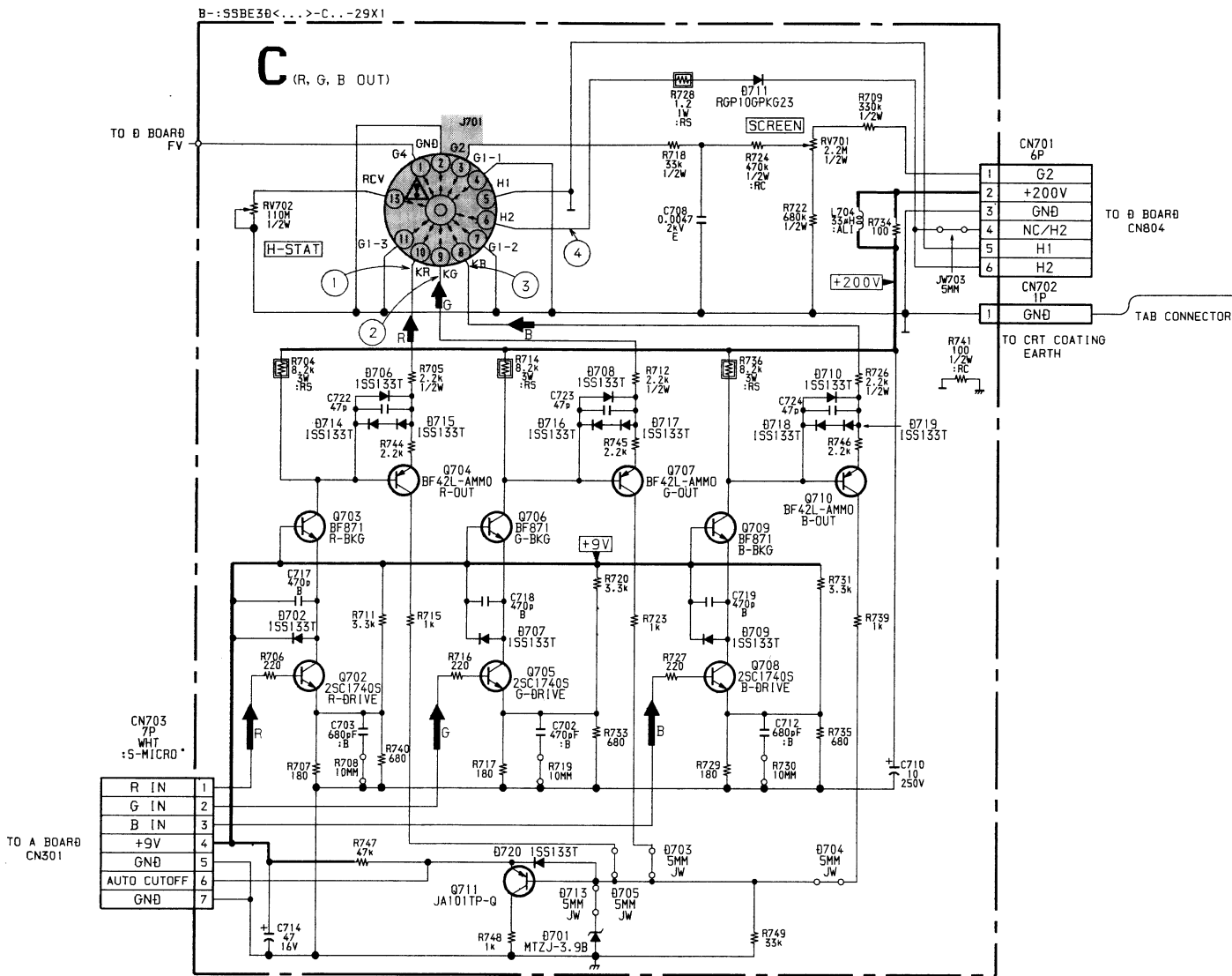


A Board <Component Side>

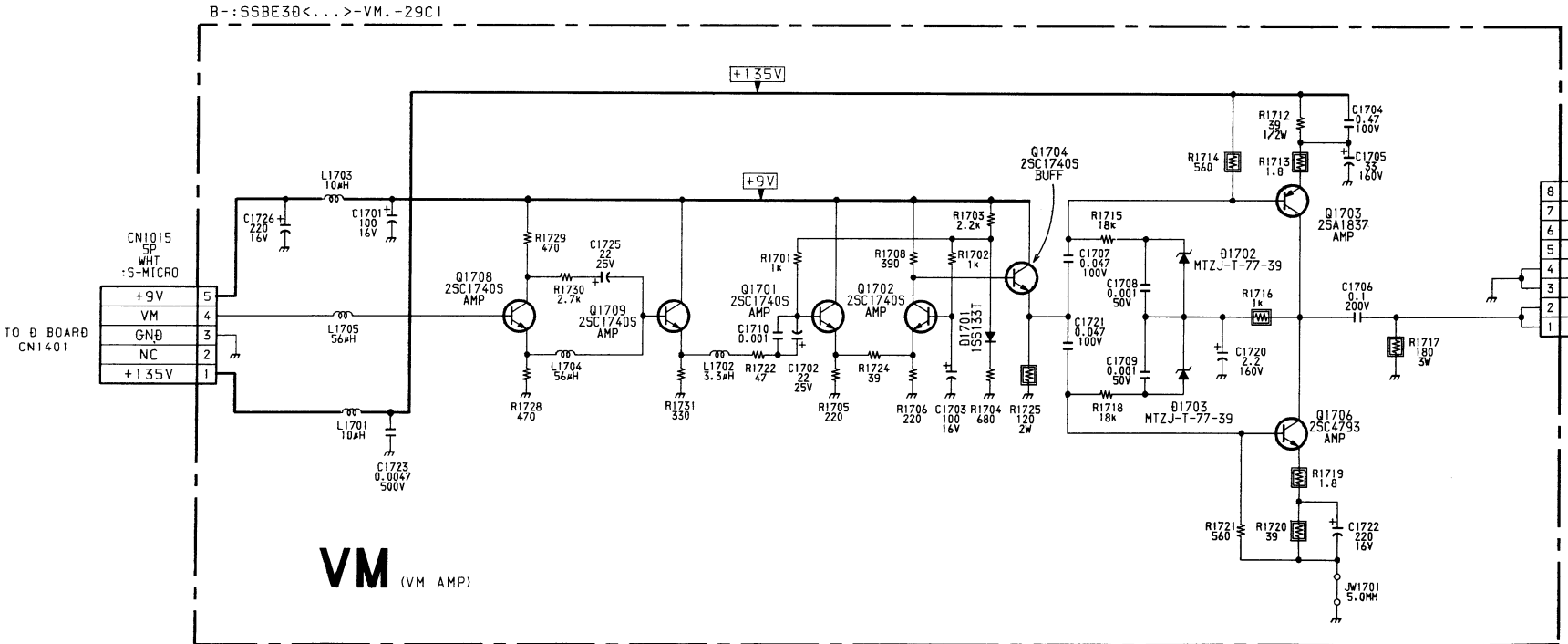
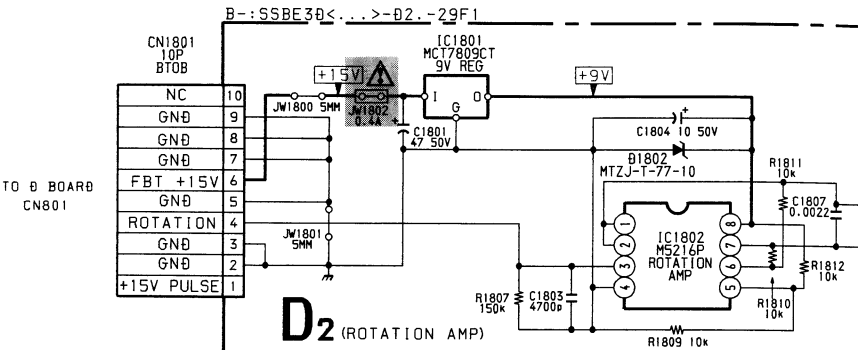
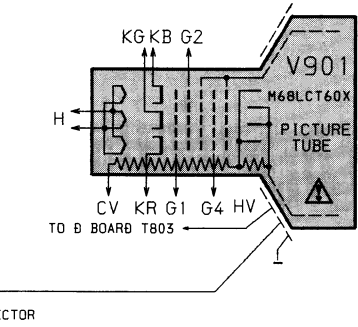
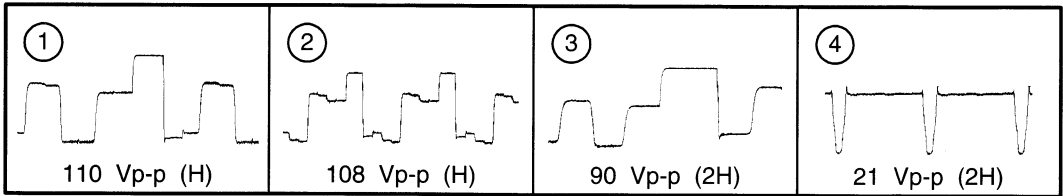


A BOARD

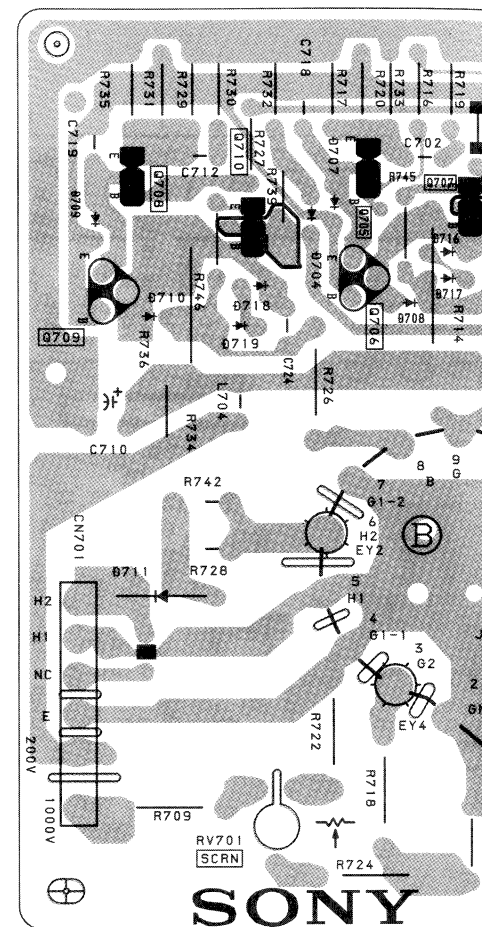
IC		Q305	E-1
IC1	F-21	Q306	C-5
IC2	E-2	Q330	D-6
IC3	F-2	Q331	D-18
IC4	G-2	Q332	C-6
IC201	A-14	Q1002	C-3
IC202	C-16	DIODE	
IC203	D-8	D2	G-3
IC301	C-19	D10	F-10
IC302	D-4	D11	F-10
IC303	D-21	D12	F-4
TRANSISTOR		D101	F-9
Q1	D-21	D201	A-11
Q4	E-22	D202	E-13
Q5	E-23	D203	A-11
Q10	E-2	D204	B-16
Q11	E-3	D205	B-16
Q15	D-2	D206	C-9
Q16	D-2	D207	C-9
Q17	D-22	D208	A-11
Q18	D-23	D209	B-11
Q80	A-23	D210	A-11
Q81	A-22	D211	B-11
Q110	F-14	D212	B-16
Q111	E-14	D213	B-16
Q112	E-14	D214	D-9
Q113	A-10	D215	D-9
Q114	A-14	D216	G-14
Q120	F-7	D217	G-14
Q121	F-5	D218	G-14
Q122	F-6	D220	G-14
Q124	F-7	D221	D-14
Q130	F-7	D222	D-14
Q201	B-10	D223	D-14
Q202	B-13	D224	D-14
Q203	D-15	D225	D-14
Q204	D-15	D226	D-14
Q205	D-7	D227	B14
Q206	C-8	D251	B-15
Q207	C-8	D320	C-5
Q300	E-4	D370	C-21
Q304	G-5		



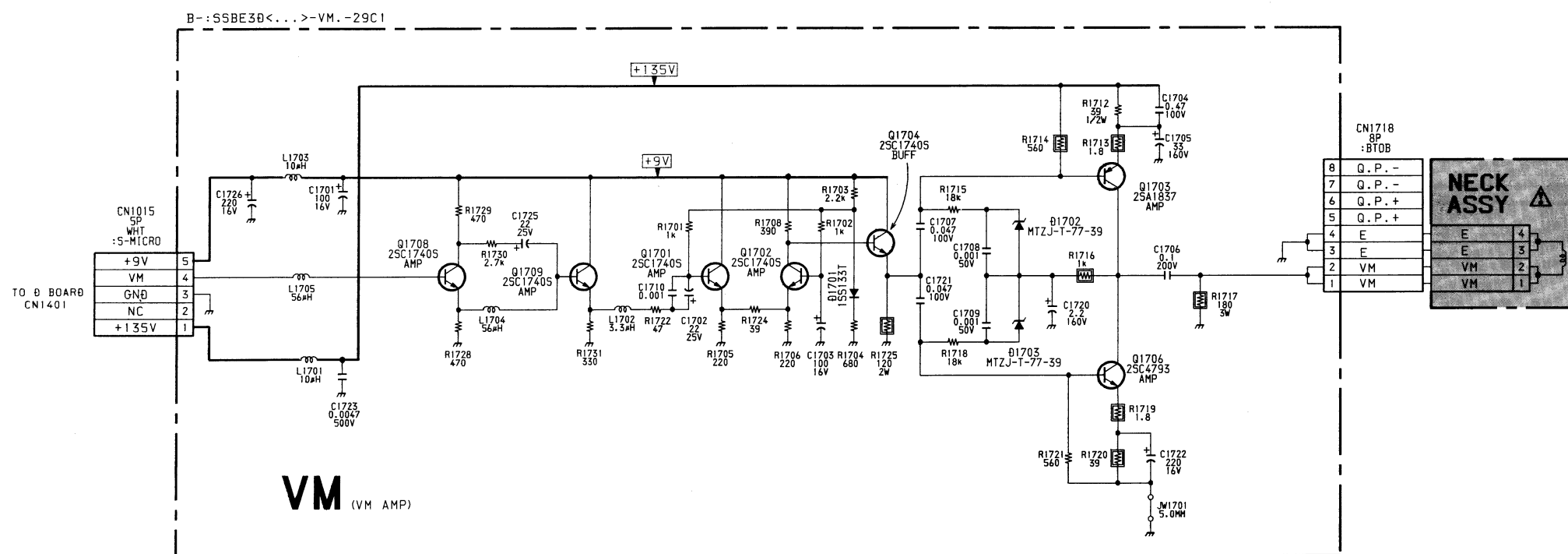
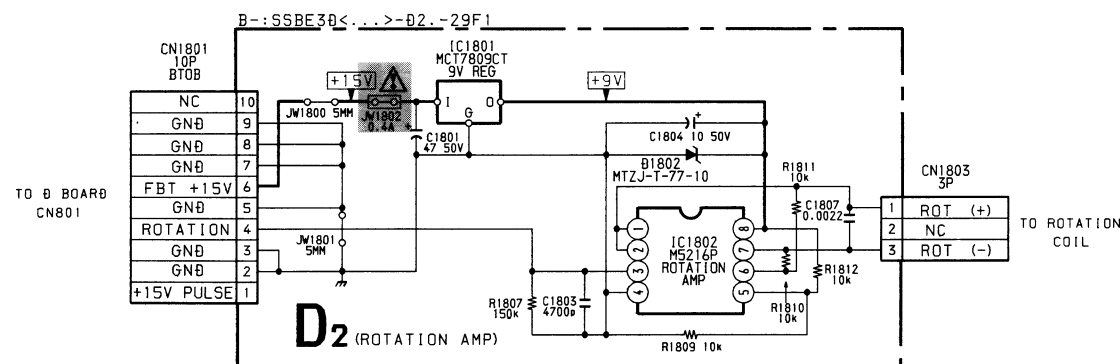
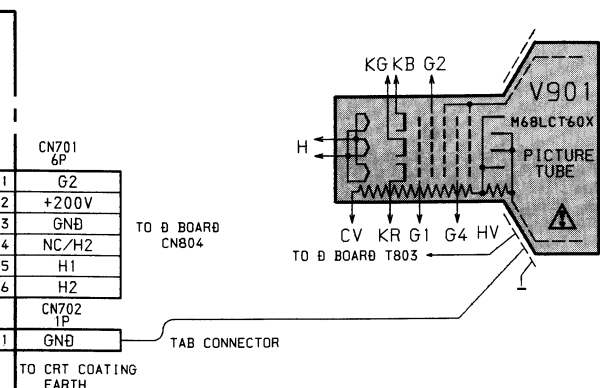
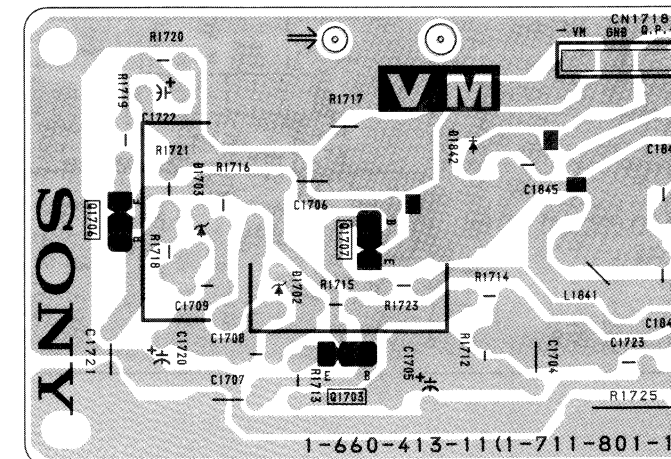
WAVEFORMS C BOARD



# C Board



# VM Board



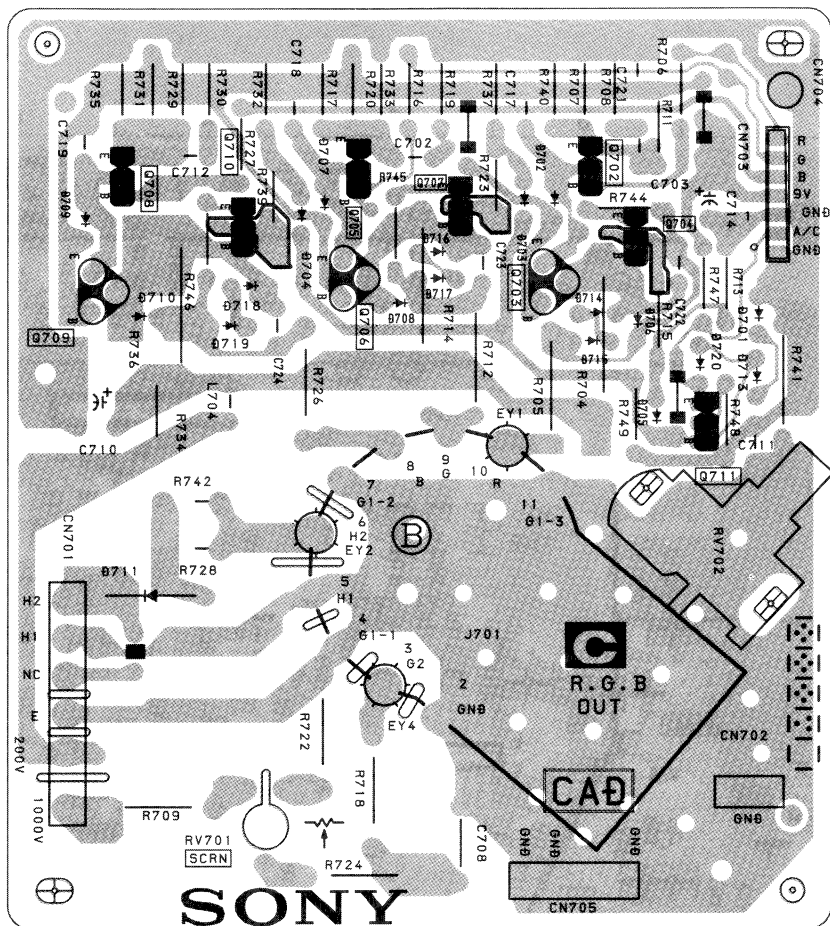
**C**

[ R, G, B OUT ]

**VM**

[ VM AMP ]

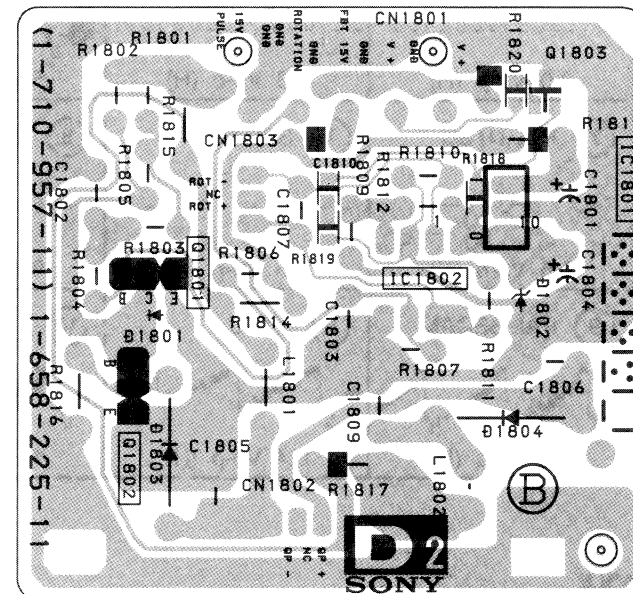
C Board



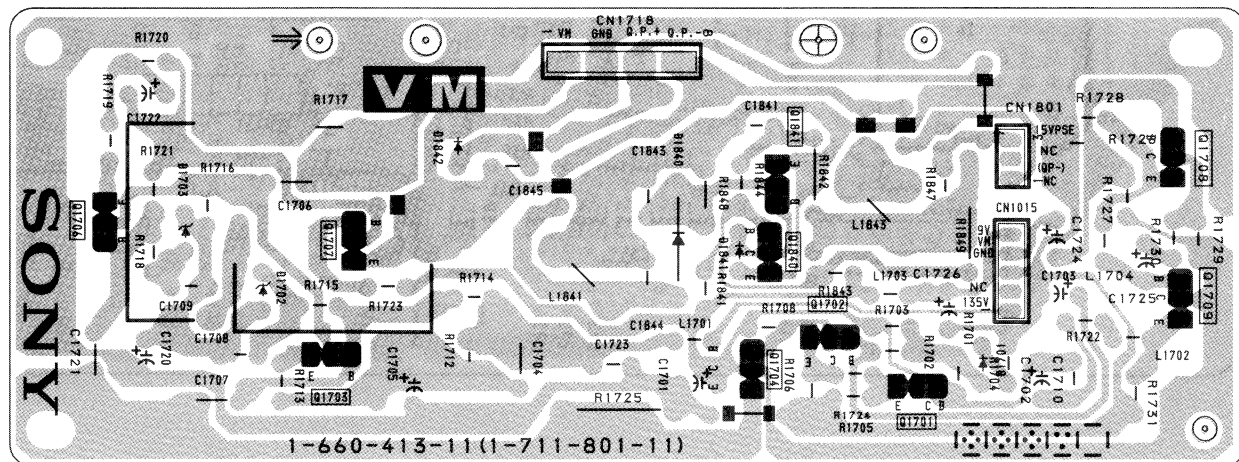
**D2**

[ ROTATION AMP ]

D2 Board



VM Board



C BOARD  
TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table				
Ref No	B Base	C Collector	E Emitter	
Q702	2.0	11.4	1.4	
Q703	12.0	168.3	11.4	
Q704	168.3	6.0	163.5	
Q705	1.7	11.4	1.2	
Q706	12.0	178.8	11.4	
Q707	178.2	6.2	173.8	
Q708	2.0	11.4	1.4	
Q709	12.0	168.3	11.4	
Q710	168.0	6.4	160.0	

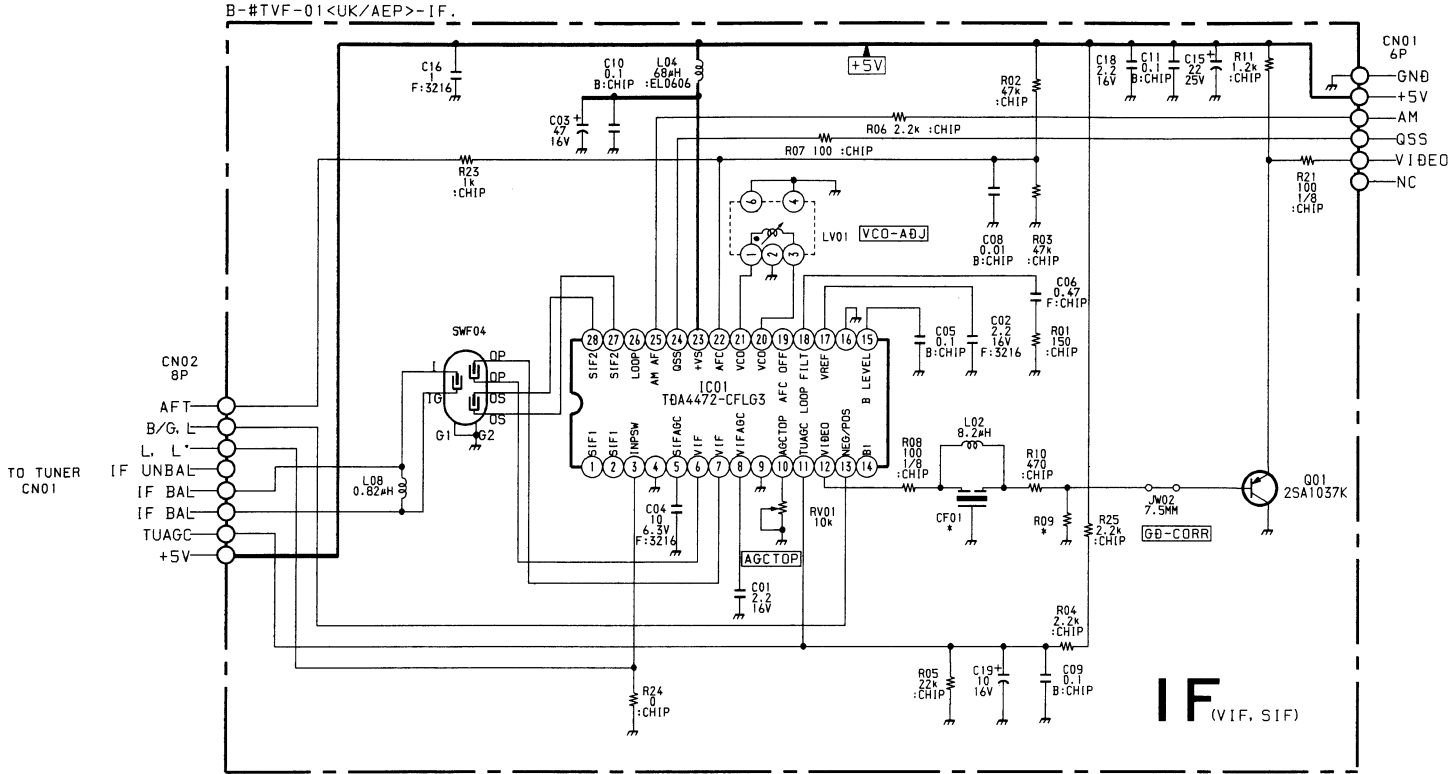
VM BOARD  
TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table				
Ref No	B Base	C Collector	E Emitter	
Q1701	2.5	8.8	1.8	
Q1702	2.5	5.5	1.8	
Q1703	134.3	71.8	134.8	
Q1704	5.5	8.8	4.8	
Q1706	1.0	71.8	0.4	
Q1707	0.7	-	-	
Q1708	2.9	6.6	2.2	
Q1709	2.2	8.8	1.5	
Q1840	0.6	-	-	

D2 BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC1802	1-2	2.8
	3	3.0
	5-6	4.4
	7	6.2
	8	9.0

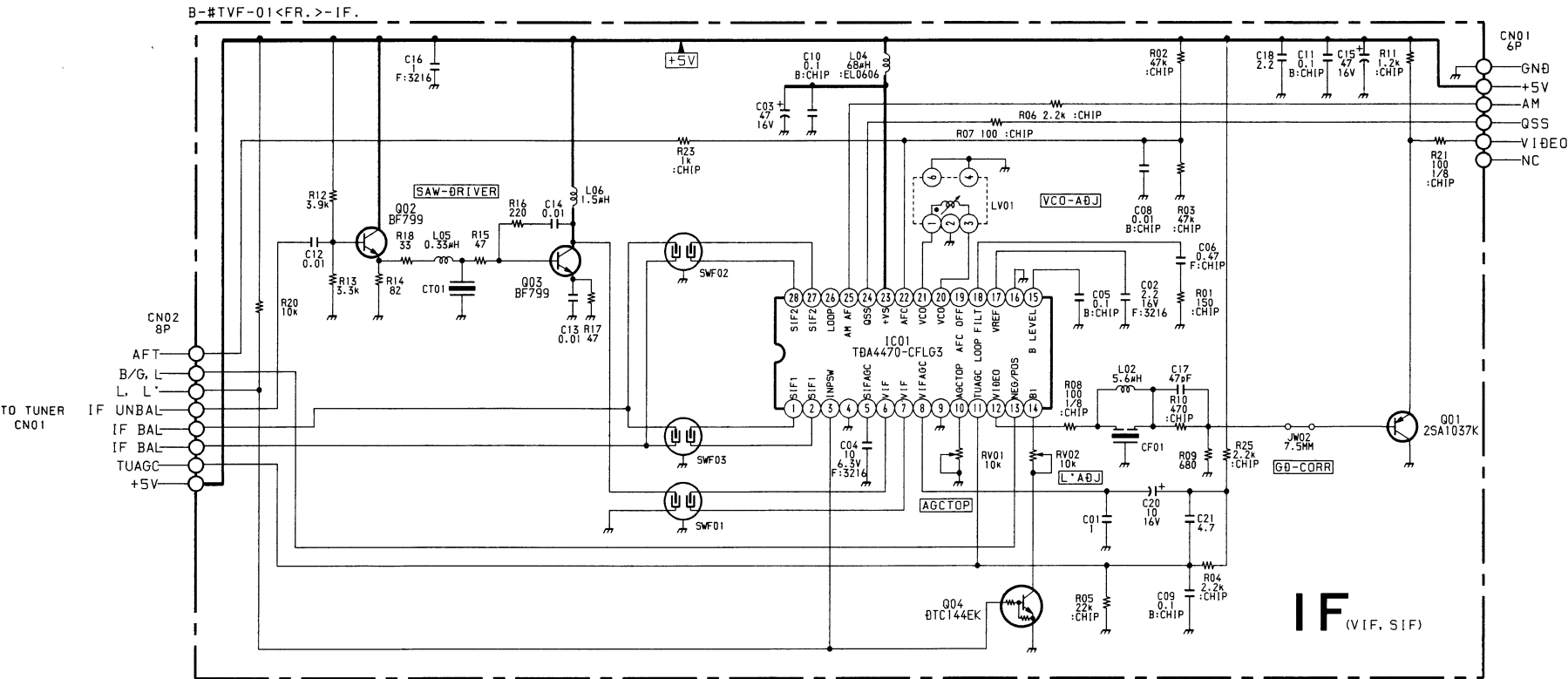
TUVIF (AEP) (KV-29X1A, 29X1D, 29X1E, 29X1K, 29X1L and 29X1R ONLY)  
TUVIF (UK) (KV-29X1U ONLY)



IF Board

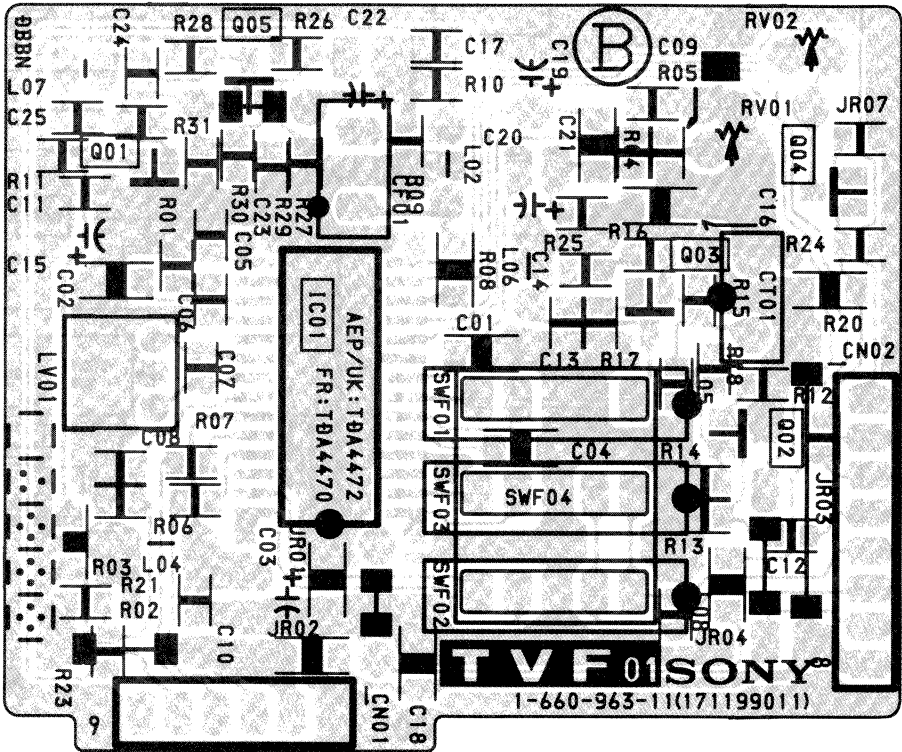
Model	29X1A	29X1D	29X1E	29X1K	29X1L	29X1R	29X1U
Ref. No.							
CF01	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	6.0MHz
R09	680MF	680MF	680MF	680MF	680MF	680MF	1K

TUVIF (FR) (KV-29X1B ONLY)

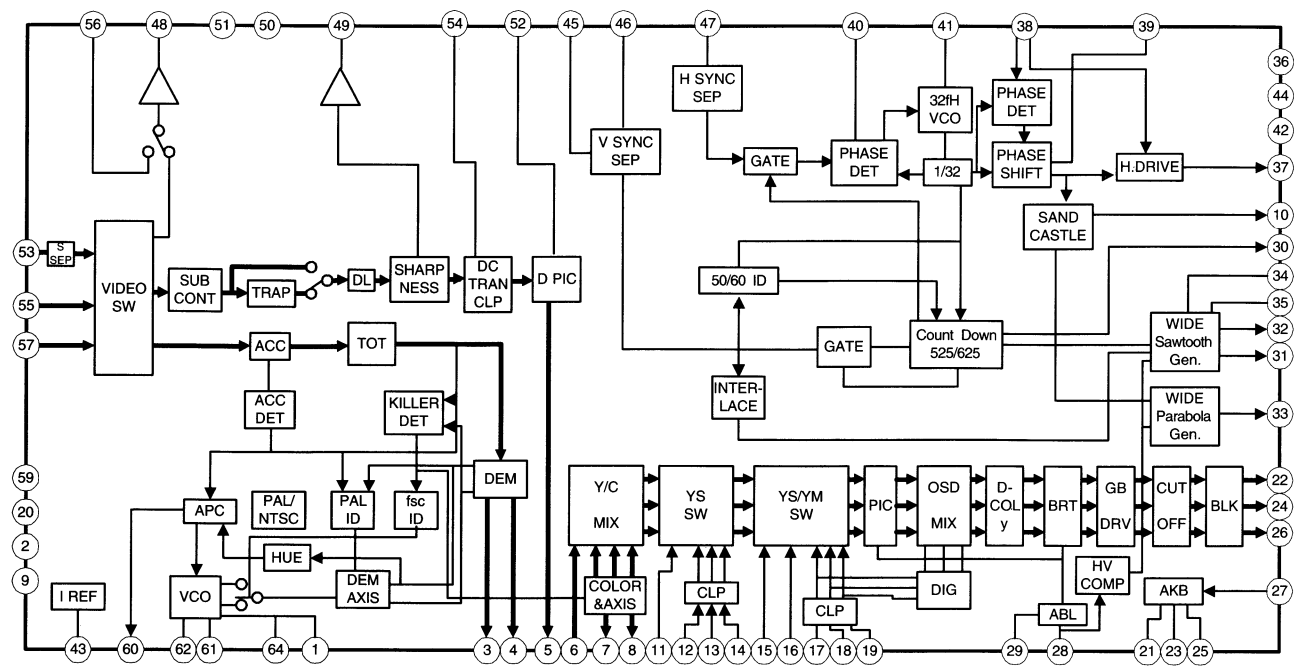


IF [ VIF, SIF ]

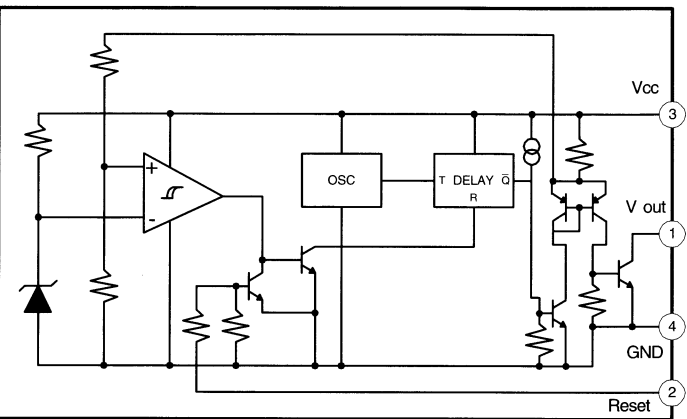
IF Board



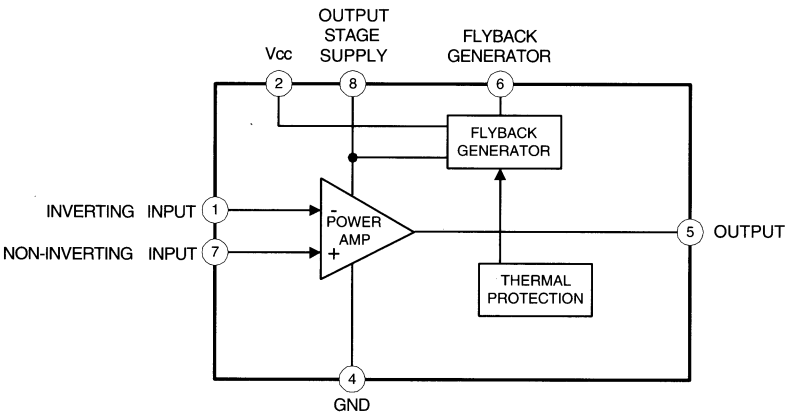
A BOARD IC301 CXA2000Q-TL



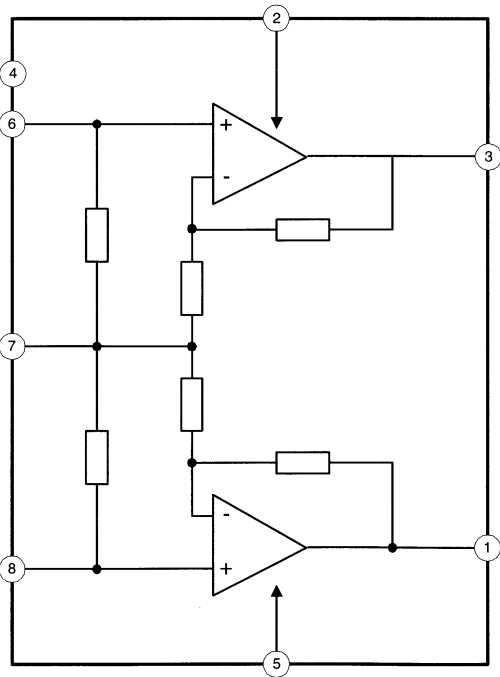
A BOARD IC4 PST593C



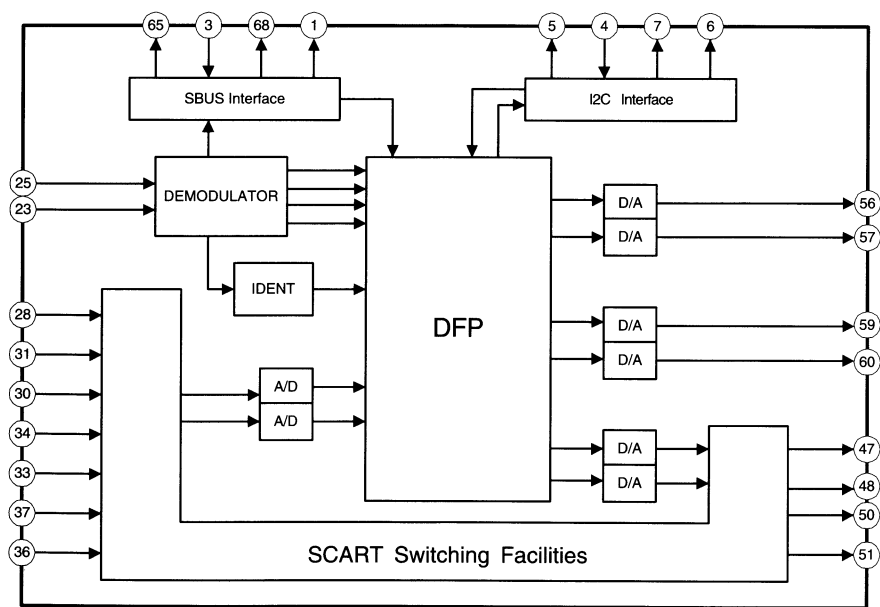
D BOARD IC500 STV9379



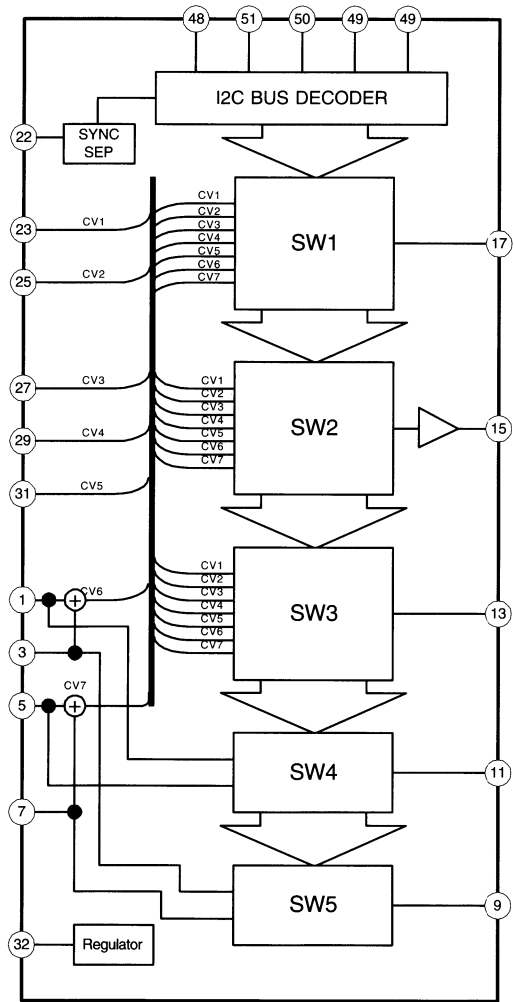
D BOARD IC1200 TDA7264



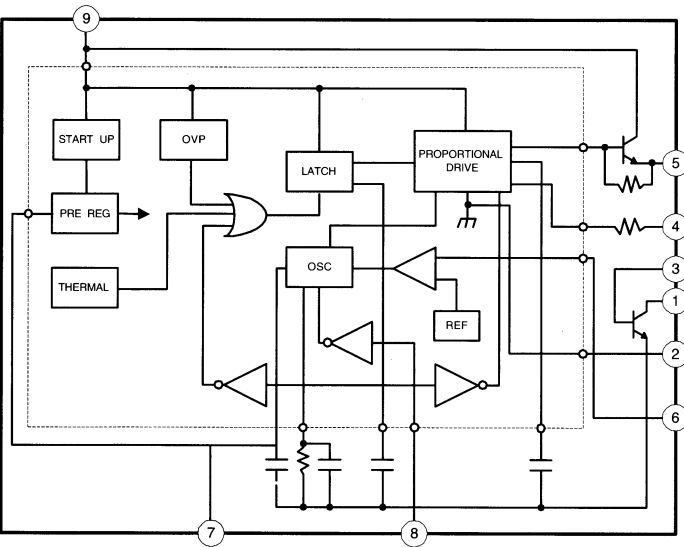
A BOARD IC202 MSP3410/MSP3400



A BOARD IC201 CXA2040Q

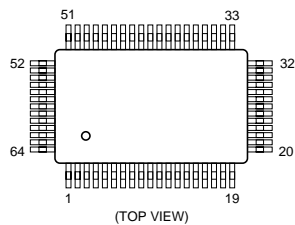


D BOARD IC600 STR-S6708



## 5-4. SEMICONDUCTORS

CXA2000Q-TL

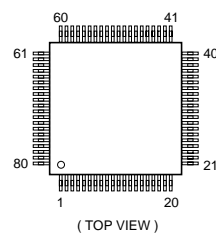


L78L05ACZ

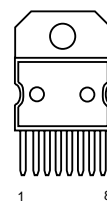


LM2940CT-5.0 NJM78M09FA  
LM2940T-9.0 TEA7605  
MCT7809CT  $\mu$ PC2405HF

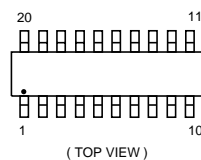
DSP56004-FJ66R2  
SDA5250M-C5-GEG



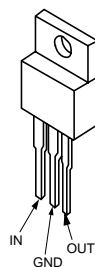
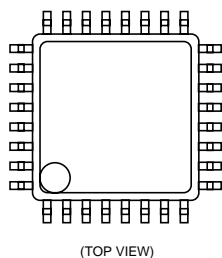
TDA7264



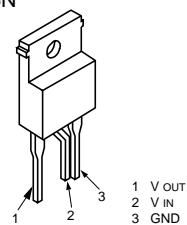
TDA8395T/N3



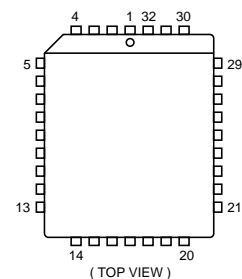
CXA2040Q-T4



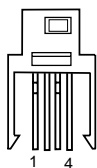
SE135N



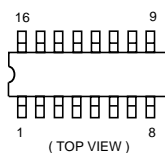
TMS27PC020A-15FML



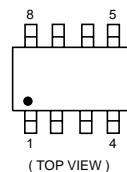
IS474



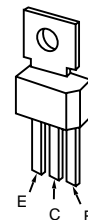
MC14052BDR2



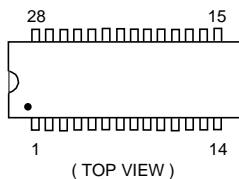
ST24E32M6TR  
TDA1387T/N1/T3  
TL072CDR



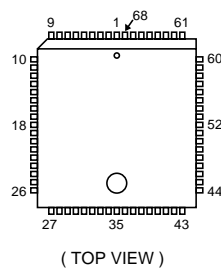
BF871-127



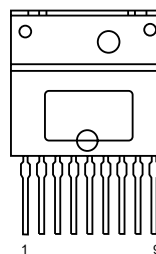
KM62256CLG-7



MSP3400C-PS-C6-T  
MSP3410B-PS-F7-T  
SDA5273CP-GEG

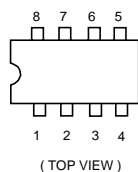


STR-S6709

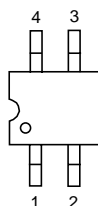


BF421L-AMMO 2SC2389STP-R  
2SA933S-QRT 2SC2510-O  
2SA933S-RT 2SDC2808STP-R  
2SA933S 2SC3502-E  
2SA1091-O 2SC3601-E

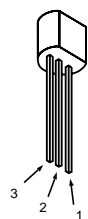
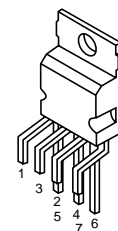
LM393P  
M5216P  
TDA2822M  
UPC393C



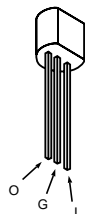
PST593C-MMP-4P



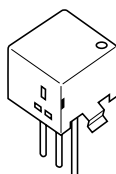
STV9379



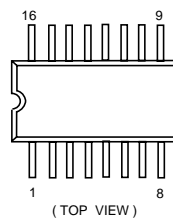
L4941BV  
LM78L05ACZ



SBX1790-51



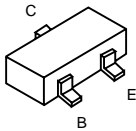
TDA4665T-T



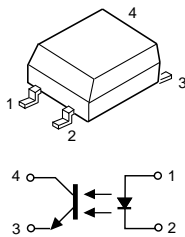
DTA144ES DTC144ES  
DTC114ES 2SC1740S-RT  
DTC143TS



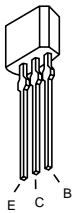
DTC114TK  
DTC144EK  
2SA1037K  
2SA1162-G  
2SC2412K-QR



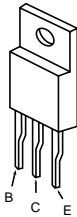
TLP721(D4-)



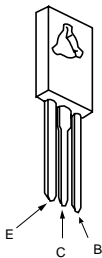
2SA1175-HFE  
2SC2785-HFE



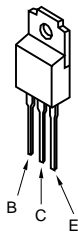
2SA1667  
2SA1837  
2SC3852A



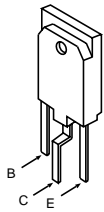
2SC2688-LK



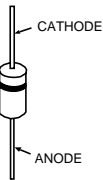
2SC4793



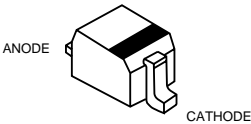
2SC4927-01



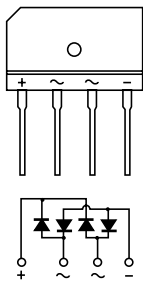
AU-01Z-V1 FML-G12S  
EG-1Z-V1 GP08D  
EGP20G RGP02-20EL-6394  
EL1Z RGP10GPKG23  
EM1-V1 RGP15GPKG23  
EU-1-V1 RU3YX  
EU2A RU4AM-T3  
EU2-V1



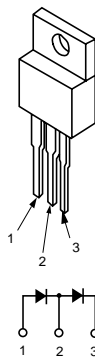
BAS216 RD5.6S-B  
DTZ9.1 Udz-TE-17-9.1B  
DTZ33B Udz-TE-17-5.6B  
MA8330 Udz-TE-17-6.8B  
1SS355



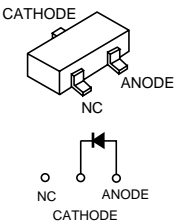
D4SB60L



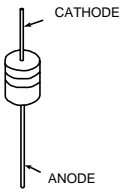
FMS-3FU-LF027-103



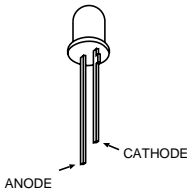
MA3030H(TX)



MTZJ-3.6A RD3.9ESB2  
MTZJ-3.9B RD5.1ESB2  
MTZJ-5.1B RD5.6ESB2  
MTZJ-5.6B RD6.8ESB2  
MTZJ-6.8B RD7.5ESB2  
MTZJ-7.5C RD9.1ESB2  
MTZJ-9.1A RD10ESB2  
MTZJ-9.1C RD39ES-B2  
MTZJ-10 1SS133T-77  
MTZJ-39C



SLA-570KT3F




## SECTION 6


### EXPLODED VIEWS

**NOTE :**

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked  are critical for safety.

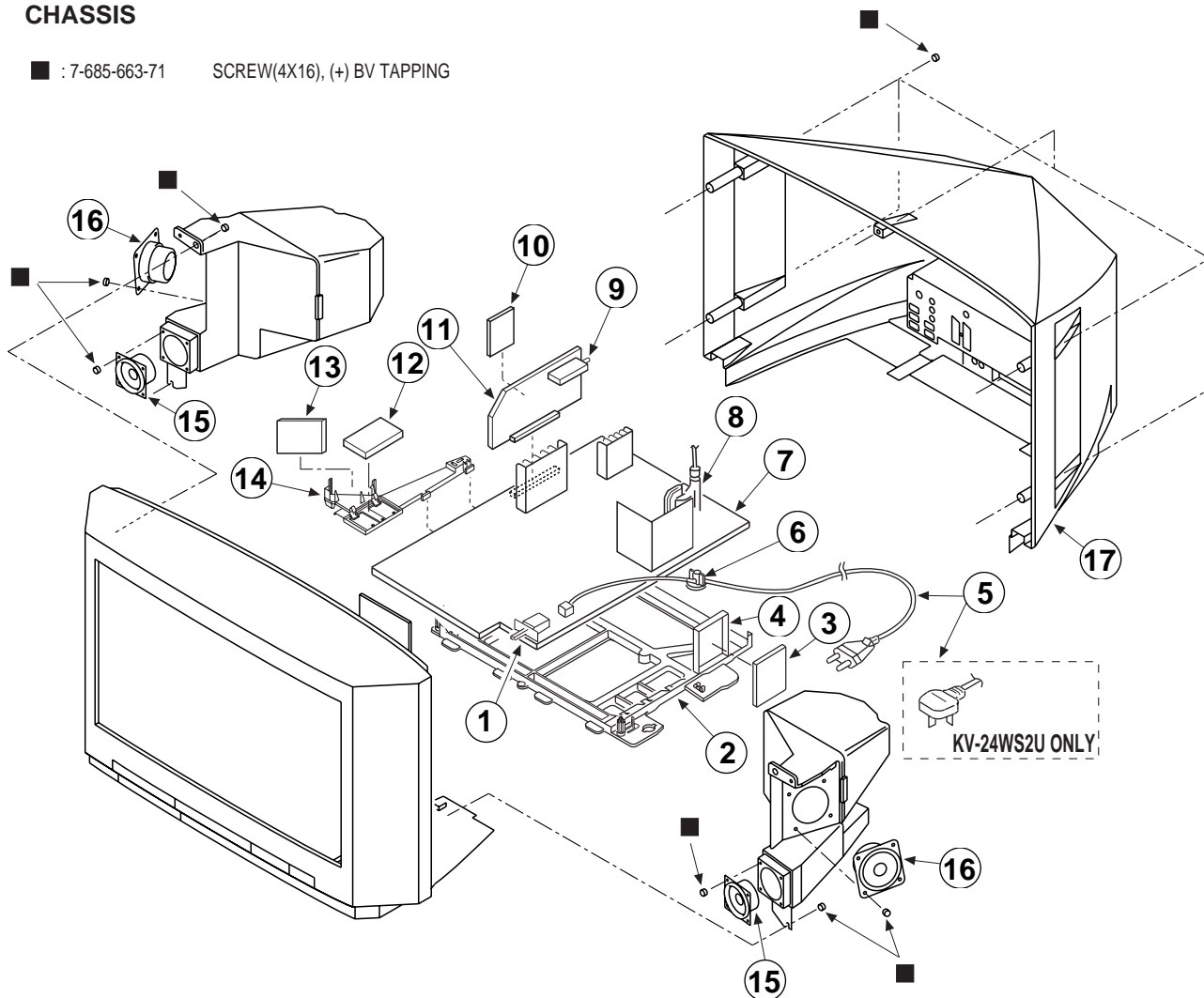
Replace only with the part number specified.






Les composants identifiés par une trame et une marque  sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

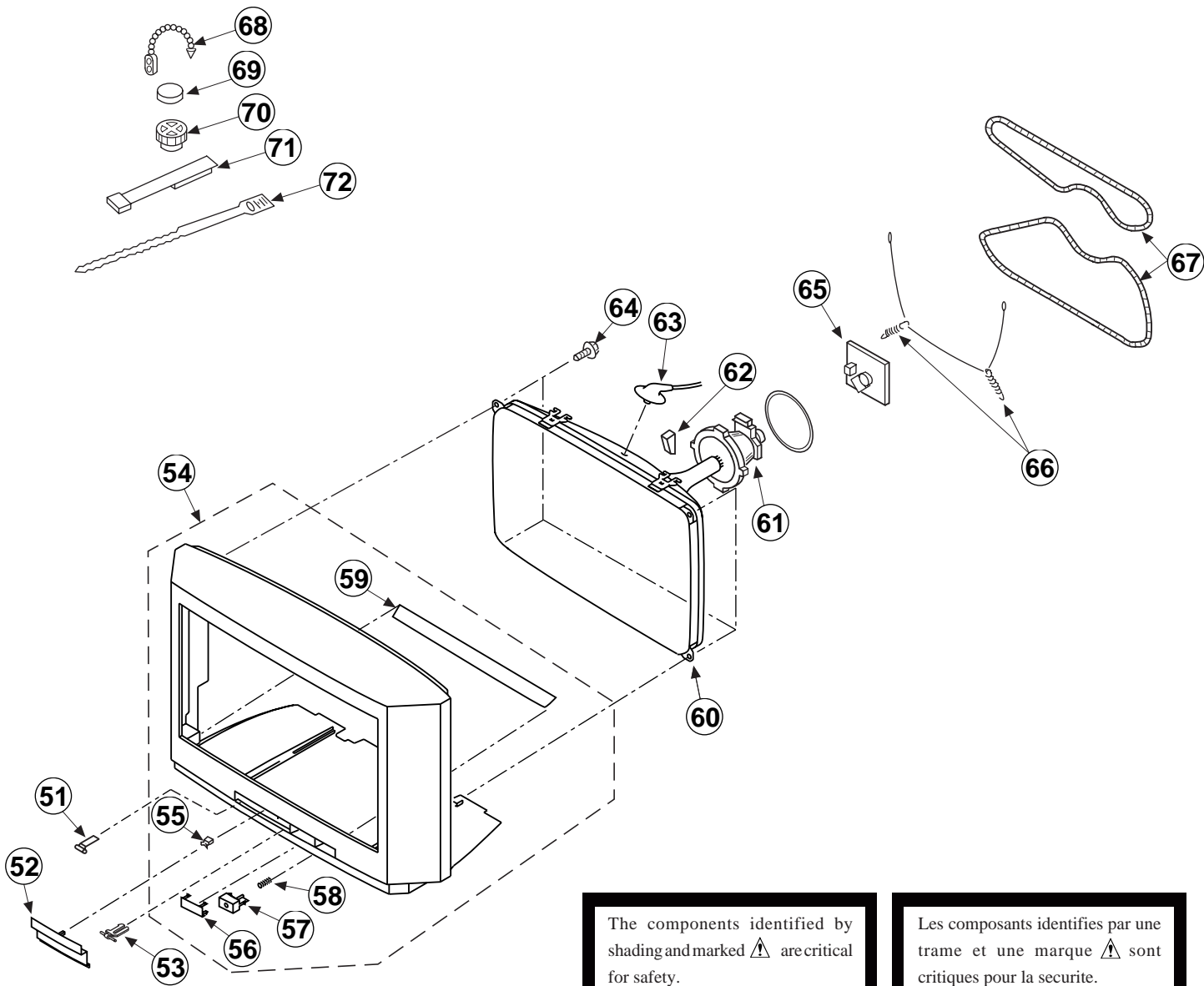
**6-1. CHASSIS**


■ : 7-685-663-71 SCREW(4X16), (+) BV TAPPING







REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
1	 1-571-433-31	SWITCH, PUSH (AC POWER)		9	1-693-340-11	TUNER/VIF (FR) (KV-24WS2B)	
2	*4-203-315-11	BRACKET, MAIN			1-693-338-11	TUNER/VIF (AEP)	
3	*A-1640-235-A	D3 BOARD, COMPLETE				(KV-24WS2D/24WS2E/24WS2K/24WS2R)	
4	*4-203-404-01	BRACKET, D3			1-693-339-11	TUNER/VIF (UK) (KV-24WS2U)	
5	 1-690-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V		10	*A-1630-529-A	A1 BOARD, COMPLETE	
	 1-765-286-11	CORD, POWER (WITH NOISE FILTER) 2.5A/250V	(KV-24WS2D)	11	*A-1632-532-A	A BOARD, COMPLETE (KV-24WS2B)	
	 1-776-860-11	CORD, POWER (FILTER) 3.0A/250V	(KV-24WS2U)		*A-1632-531-A	A BOARD, COMPLETE (KV-24WS2D)	
6	*4-202-531-01	AC CORD LOCK (SC)			*A-1632-533-A	A BOARD, COMPLETE (KV-24WS2E)	
7	*A-1642-193-A	D BOARD, COMPLETE			*A-1632-534-A	A BOARD, COMPLETE (KV-24WS2K)	
8	 1-453-220-11	TRANSFORMER ASSY, FLYBACK (NX-1670/U2B4)			*A-1632-535-A	A BOARD, COMPLETE (KV-24WS2R)	
					*A-1632-488-A	A BOARD, COMPLETE (KV-24WS2U)	
				12	*A-1649-018-A	K1 BOARD, COMPLETE	
				13	*A-1651-088-A	J BOARD, COMPLETE	
				14	*4-203-562-01	BRACKET, J-K-T	
				15	1-505-154-11	SPEAKER (6.5CM)	
				16	1-505-155-11	SPEAKER (10CM)	
				17	4-203-558-01	COVER, REAR	


6-2. PICTURE TUBE



The components identified by shading and marked  are critical for safety. Replace only with the part number specified.

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REF NO	PART NO	DESCRIPTION	REMARK
51	4-045-250-01	DAMPER	
52	4-203-561-01	DOOR	
53	3-703-035-11	SHAFT, LID	
54	X-4200-281-1	BEZNET ASSY	55-59
55	4-047-464-01	CATCHER PUSH	
56	4-203-559-01	WINDOW ORNAMENTAL	
57	4-203-560-01	BUTTON, POWER	
58	4-202-964-01	SPRING	
59	*4-203-553-01	SHEET, BLOTING	
60	 8-737-802-05	PICTURE TUBE (SD-174) (W56LEZ010X)	
61	 8-451-452-11	DEFLECTION YOKE (Y24GIAM)	
62	3-704-495-01	SPACER, DY	
63	 1-540-006-22	CAP ASSY, HIGH-VOLTAGE	
64	4-203-043-01	SCREW (M), PT	
65	*A-1638-101-A	C BOARD, COMPLETE	
66	4-369-318-21	SPRING, TENSION	

REF NO	PART NO	DESCRIPTION	REMARK
67	 1-411-620-11	COIL DEGAUSSING	
68	4-308-870-00	CLIP, LEAD WIRE	
69	1-452-032-00	MAGNET, DISK; 10MM Ø	
70	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
71	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
72	3-701-007-00	BAND, BINDING	

## SECTION 7

### ELECTRICAL PARTS LIST

The components identified by shading and marked  $\Delta$  are critical for safety.  
Replace only with the part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

## CAPACITORS

MF : mF, PF : mmF

## COILS

MMH : mH,  $\mu$ H : mH

## RESISTORS

- All resistors are in ohms
- F : nonflammable

A1

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1630-529-A	A1 BOARD, COMPLETE *****					
		< CAPACITOR >				< DIODE >	
C1201	1-164-695-11	CERAMIC CHIP 0.0022MF	5%	D1201	8-719-988-62	DIODE 1SS355	
C1202	1-163-038-00	CERAMIC CHIP 0.1MF		D1203	8-719-976-99	DIODE DTZ5.1B	
C1203	1-163-038-00	CERAMIC CHIP 0.1MF				< IC >	
C1204	1-163-038-00	CERAMIC CHIP 0.1MF		IC1201	8-759-377-62	IC DSP56004-FJ66R2	
C1205	1-163-038-00	CERAMIC CHIP 0.1MF		IC1202	8-759-349-93	IC KM62256CLG-7	
				IC1203	8-759-384-64	IC TDA1387T/N1/T3	
C1206	1-163-038-00	CERAMIC CHIP 0.1MF		IC1204	8-759-384-64	IC TDA1387T/N1/T3	
C1207	1-163-038-00	CERAMIC CHIP 0.1MF		IC1205	8-759-387-76	IC TL072CDR	
C1208	1-163-038-00	CERAMIC CHIP 0.1MF		IC1206	8-759-387-76	IC TL072CDR	
C1209	1-163-038-00	CERAMIC CHIP 0.1MF		IC1207	8-759-991-41	IC LM78L05ACZ	
C1210	1-163-038-00	CERAMIC CHIP 0.1MF				< COIL >	
C1211	1-163-038-00	CERAMIC CHIP 0.1MF		L1204	1-410-989-11	INDUCTOR CHIP 0.47UH	
C1212	1-126-933-11	ELECT 100MF	20%	L1205	1-410-989-11	INDUCTOR CHIP 0.47UH	
C1213	1-164-700-11	CERAMIC CHIP 0.68MF		L1206	1-410-989-11	INDUCTOR CHIP 0.47UH	
C1215	1-126-967-11	ELECT 47MF	20%	L1207	1-410-989-11	INDUCTOR CHIP 0.47UH	
C1216	1-163-038-00	CERAMIC CHIP 0.1MF		L1208	1-410-989-11	INDUCTOR CHIP 0.47UH	
C1217	1-163-038-00	CERAMIC CHIP 0.1MF		L1209	1-410-989-11	INDUCTOR CHIP 0.47UH	
C1218	1-126-964-11	ELECT 10MF	20%	L1210	1-410-989-11	INDUCTOR CHIP 0.47UH	
C1219	1-126-967-11	ELECT 47MF	20%	L1211	1-410-989-11	INDUCTOR CHIP 0.47UH	
C1220	1-163-145-00	CERAMIC CHIP 0.0015MF	5%	L1212	1-410-989-11	INDUCTOR CHIP 0.47UH	
C1221	1-163-145-00	CERAMIC CHIP 0.0015MF	5%	L1213	1-410-989-11	INDUCTOR CHIP 0.47UH	
C1222	1-163-038-00	CERAMIC CHIP 0.1MF		L1220	1-410-989-11	INDUCTOR CHIP 0.47UH	
C1223	1-126-967-11	ELECT 47MF	20%	L1221	1-410-989-11	INDUCTOR CHIP 0.47UH	
C1224	1-126-967-11	ELECT 47MF	20%			< TRANSISTOR >	
C1225	1-163-038-00	CERAMIC CHIP 0.1MF		Q1201	8-729-902-99	TRANSISTOR DTC114TK	
C1226	1-163-038-00	CERAMIC CHIP 0.1MF				< RESISTOR >	
C1227	1-126-964-11	ELECT 10MF	20%	R1202	1-216-025-00	METAL GLAZE 100 5% 1/10W	
C1228	1-163-145-00	CERAMIC CHIP 0.0015MF	5%	R1204	1-216-025-00	METAL GLAZE 100 5% 1/10W	
C1229	1-163-145-00	CERAMIC CHIP 0.0015MF	5%	R1205	1-216-025-00	METAL GLAZE 100 5% 1/10W	
C1230	1-163-038-00	CERAMIC CHIP 0.1MF		R1206	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
C1231	1-126-967-11	ELECT 47MF	20%	R1207	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
C1232	1-163-038-00	CERAMIC CHIP 0.1MF		R1208	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
C1233	1-126-967-11	ELECT 47MF	20%	R1209	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
C1236	1-126-967-11	ELECT 47MF	20%	R1210	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
C1237	1-163-038-00	CERAMIC CHIP 0.1MF		R1211	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
C1238	1-163-038-00	CERAMIC CHIP 0.1MF		R1212	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
		< CONNECTOR >		R1213	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
CN1202	1-766-929-11	CONNECTOR, BOARD TO BOARD 8P		R1214	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
CN1203	1-766-929-11	CONNECTOR, BOARD TO BOARD 8P		R1215	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
CN1204	*1-564-519-11	PLUG, CONNECTOR 4P					



REF.NO.	PART NO.	DESCRIPTION				REMARK
R1216	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1217	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1218	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1219	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1220	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1221	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1222	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1223	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R1224	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1225	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1226	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1227	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R1228	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1229	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1230	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R1231	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1232	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1233	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1234	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R1235	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1236	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1237	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1238	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1239	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1240	1-216-295-00	METAL GLAZE	0	5%	1/10W	
*****						
	*A-1632-532-A	A BOARD, COMPLETE (KV-24WS2B)				
		*****				
	*A-1632-531-A	A BOARD, COMPLETE (KV-24WS2D)				
		*****				
	*A-1632-533-A	A BOARD, COMPLETE (KV-24WS2E)				
		*****				
	*A-1632-534-A	A BOARD, COMPLETE (KV-24WS2K)				
		*****				
	*A-1632-535-A	A BOARD, COMPLETE (KV-24WS2R)				
		*****				
	*A-1632-488-A	A BOARD, COMPLETE (KV-24WS2U)				
		*****				
	1-750-797-11	SOCKET, PLCC				
	< CAPACITOR >					
C1	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C2	1-126-965-11	ELECT	22MF	20%	50V	
C3	1-163-104-00	CERAMIC CHIP	30PF	5%	50V	
C4	1-163-104-00	CERAMIC CHIP	30PF	5%	50V	
C8	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C10	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	
C11	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	
C14	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C15	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C18	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C19	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	
C20	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C21	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C22	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C43	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C45	1-163-038-00	CERAMIC CHIP	0.1MF		25V	
C80	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C81	1-215-459-00	FILM	0.47MF		50V	
C82	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V	

C90	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C101	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C102	1-126-934-11	ELECT	220MF	20%	16V
C103	1-126-965-11	ELECT	22MF	20%	50V
C104	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C110	1-126-967-11	ELECT	47MF	20%	16V
C112	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C113	1-126-967-11	ELECT	47MF	20%	16V
C115	1-163-129-00	CERAMIC	330PF	5%	50V
C120	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C121	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C122	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C123	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C124	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C201	1-163-139-00	CERAMIC CHIP	820PF	10%	50V
C202	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C203	1-126-933-11	ELECT	100MF	20%	16V
C204	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C205	1-126-965-11	ELECT	22MF	20%	50V
C206	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C207	1-126-964-11	ELECT	10MF	20%	50V
C208	1-126-964-11	ELECT	10MF	20%	50V
C209	1-126-964-11	ELECT	10MF	20%	50V
C210	1-216-295-00	METAL GLAZE	0	5%	1/10W
C211	1-126-964-11	ELECT	10MF	20%	50V
C212	1-164-346-11	CERAMIC CHIP	1MF		16V
C213	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C214	1-164-346-11	CERAMIC CHIP	1MF		16V
C215	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C216	1-126-967-11	ELECT	47MF	20%	16V
C217	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C218	1-126-967-11	ELECT	47MF	20%	16V
C219	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C220	1-126-964-11	ELECT	10MF	20%	50V
C221	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C222	1-164-346-11	CERAMIC CHIP	1MF		16V
C223	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C224	1-164-346-11	CERAMIC CHIP	1MF		16V
C225	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C226	1-126-967-11	ELECT	47MF	20%	16V
C227	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C228	1-126-967-11	ELECT	47MF	20%	16V
C229	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C230	1-216-295-00	METAL GLAZE	0	5%	1/10W
C231	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C232	1-126-967-11	ELECT	47MF	20%	16V
C237	1-126-964-11	ELECT	10MF	20%	50V
C239	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C240	1-164-346-11	CERAMIC CHIP	1MF		16V
C241	1-164-346-11	CERAMIC CHIP	1MF		16V
C251	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C252	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C253	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C254	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C255	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C256	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C257	1-126-965-11	ELECT	22MF	20%	50V
C258	1-126-964-11	ELECT	10MF	20%	50V
C259	1-164-336-11	CERAMIC CHIP	0.33MF		25V
C260	1-163-038-00	CERAMIC CHIP	0.1MF		25V



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C261	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C341	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C262	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C342	1-164-346-11	CERAMIC CHIP 1MF	16V
C263	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C343	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C264	1-126-962-11	ELECT 3.3MF	20% 50V	C344	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C265	1-126-964-11	ELECT 10MF	20% 50V	C347	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C266	1-126-964-11	ELECT 10MF	20% 50V	C348	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C267	1-126-965-11	ELECT 22MF	20% 50V	C350	1-126-964-11	ELECT 10MF	20% 50V
C268	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C351	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C269	1-163-131-00	CERAMIC CHIP 390PF	5% 50V	C352	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C270	1-163-131-00	CERAMIC CHIP 390PF	5% 50V	C353	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C271	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C354	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C272	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C355	1-126-965-11	ELECT 22MF	20% 50V
C273	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C356	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C274	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C357	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C275	1-164-346-11	CERAMIC CHIP 1MF	16V	C358	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C276	1-164-346-11	CERAMIC CHIP 1MF	16V	C359	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C277	1-164-346-11	CERAMIC CHIP 1MF	16V	C360	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C278	1-164-346-11	CERAMIC CHIP 1MF	16V	C370	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C279	1-126-965-11	ELECT 22MF	20% 50V			(KV-24WS2B/24WS2D/24WS2E/24WS2K/24WS2R)	
C280	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C371	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C281	1-126-965-11	ELECT 22MF	20% 50V	C372	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C282	1-163-038-00	CERAMIC CHIP 0.1MF	25V			(KV-24WS2B/24WS2D/24WS2E/24WS2K/24WS2R)	
C300	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C373	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V
C301	1-163-038-00	CERAMIC CHIP 0.1MF	25V			(KV-24WS2B/24WS2D/24WS2E/24WS2K/24WS2R)	
C302	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C1001	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C303	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C1002	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C304	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C1010	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C305	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C1013	1-126-965-11	ELECT 22MF	20% 50V
C306	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1014	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C307	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1015	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V
C308	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C1020	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C309	1-164-346-11	CERAMIC CHIP 1MF	16V	< FILTER >			
C310	1-164-346-11	CERAMIC CHIP 1MF	16V	CF120	1-409-327-00	TRAP, CERAMIC (6.5MHz) (KV-24WS2B)	
C311	1-164-346-11	CERAMIC CHIP 1MF	16V	< CONNECTOR >			
C312	1-164-505-11	CERAMIC CHIP 2.2MF	16V	CN1	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P	
C313	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	CN2	*1-564-508-11	PIN, CONNECTOR 5P	
C315	1-216-295-00	METAL GLAZE 0	5% 1/10W	CN4	1-568-878-51	PIN, CONNECTOR 3P	
C317	1-163-038-00	CERAMIC CHIP 0.1MF	25V	CN201	1-766-296-11	CONNECTOR, DUAL SCART	
C319	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	CN202	1-766-928-11	CONNECTOR, BOARD TO BOARD 8P	
C320	1-126-965-11	ELECT 22MF	20% 50V	CN203	1-766-928-11	CONNECTOR, BOARD TO BOARD 8P	
C321	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	CN301	*1-568-882-51	PIN, CONNECTOR 7P	
C322	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	< DIODE >			
C323	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	D2	8-719-988-62	DIODE 1SS355	
C324	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	D10	8-719-158-15	DIODE RD5.6S-B	
C325	1-164-346-11	CERAMIC CHIP 1MF	16V	D11	8-719-158-15	DIODE RD5.6S-B	
C326	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	D12	8-719-158-15	DIODE RD5.6S-B	
C327	1-137-374-11	FILM 0.047MF	5% 50V	D101	8-719-977-81	DIODE DTZ33B	
C328	1-126-964-11	ELECT 10MF	20% 50V	D201	8-719-977-22	DIODE DTZ9.1	
C329	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D202	8-719-977-22	DIODE DTZ9.1	
C330	1-130-777-00	FILM 0.1MF	5% 63V	D203	8-719-977-22	DIODE DTZ9.1	
C331	1-137-581-11	FILM 0.1MF	5% 100V	D204	8-719-977-22	DIODE DTZ9.1	
C332	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D205	8-719-977-22	DIODE DTZ9.1	
C333	1-126-933-11	ELECT 100MF	20% 16V	D206	8-719-977-22	DIODE DTZ9.1	
C334	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D207	8-719-977-22	DIODE DTZ9.1	
C335	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D208	8-719-977-22	DIODE DTZ9.1	
C336	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	D209	8-719-977-22	DIODE DTZ9.1	
C337	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	D210	8-719-977-22	DIODE DTZ9.1	
C338	1-164-346-11	CERAMIC CHIP 1MF	16V				
C339	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V				
C340	1-126-933-11	ELECT 100MF	20% 16V				



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D211	8-719-977-22	DIODE DTZ9.1		Q17	8-729-216-22	TRANSISTOR 2SA1162-G	
D212	8-719-977-22	DIODE DTZ9.1		Q80	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D213	8-719-977-22	DIODE DTZ9.1		Q81	8-729-216-22	TRANSISTOR 2SA1162-G	
D214	8-719-977-22	DIODE DTZ9.1		Q110	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D215	8-719-977-22	DIODE DTZ9.1		Q111	8-729-216-22	TRANSISTOR 2SA1162-G	
D216	8-719-158-15	DIODE RD5.6S-B		Q112	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D217	8-719-158-15	DIODE RD5.6S-B		Q113	8-729-216-22	TRANSISTOR 2SA1162-G	
D218	8-719-158-15	DIODE RD5.6S-B		Q114	8-729-216-22	TRANSISTOR 2SA1162-G	
D220	8-719-988-62	DIODE 1SS355		Q120	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D221	8-719-988-62	DIODE 1SS355		Q121	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-24WS2B)	
D222	8-719-977-22	DIODE DTZ9.1		Q122	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D223	8-719-977-22	DIODE DTZ9.1		Q124	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-24WS2B)	
D224	8-719-977-22	DIODE DTZ9.1		Q130	8-729-216-22	TRANSISTOR 2SA1162-G (KV-24WS2B)	
D225	8-719-977-22	DIODE DTZ9.1		Q201	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D226	8-719-977-22	DIODE DTZ9.1		Q202	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D227	8-719-977-13	DIODE DTZ9.1		Q205	8-729-901-01	TRANSISTOR DTC144EK	
D228	8-719-976-99	DIODE DTZ-FE-17-5.1B		Q206	8-729-216-22	TRANSISTOR 2SA1162-G	
D251	8-719-047-16	DIODE BAS216		Q207	8-729-216-22	TRANSISTOR 2SA1162-G	
D302	8-719-988-62	DIODE 1SS355		Q300	8-729-901-01	TRANSISTOR DTC144EK	
D320	8-719-977-22	DIODE DTZ9.1		Q304	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D370	8-719-047-16	DIODE BAS216 (KV-24WS2B/24WS2D/24WS2E/24WS2K/24WS2R)		Q305	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D1010	8-719-036-58	DIODE MA3030-H(TX)		Q306	8-729-901-01	TRANSISTOR DTC144EK	
< LINE FILTER >				Q330	8-729-216-22	TRANSISTOR 2SA1162-G	
FL101	1-236-071-11	ENCAPSULATED COMPONENT		Q331	8-729-920-74	TRANSISTOR 2SC2412K-QR	
FL201	1-236-071-11	ENCAPSULATED COMPONENT		Q332	8-729-920-74	TRANSISTOR 2SC2412K-QR	
FL202	1-236-071-11	ENCAPSULATED COMPONENT		Q1001	8-729-901-01	TRANSISTOR DTC144EK	
FL203	1-236-071-11	ENCAPSULATED COMPONENT		Q1002	8-729-216-22	TRANSISTOR 2SA1162-G	
FL1001	1-236-071-11	ENCAPSULATED COMPONENT		< RESISTOR >			
< IC >				JR101	1-216-295-00	METAL GLAZE 0 5%	1/10W
IC1	8-759-376-75	IC SDA5250M-C5-GEG		JR201	1-216-295-00	METAL GLAZE 0 5%	1/10W
IC2	8-759-334-20	IC ST24E32M6TR		JR204	1-216-295-00	METAL GLAZE 0 5%	1/10W
IC3	8-759-353-82	IC TMS27PC020-15FML		JR205	1-216-295-00	METAL GLAZE 0 5%	1/10W
IC4	8-759-394-57	IC PST593C-MMP-4P		JR206	1-216-295-00	METAL GLAZE 0 5%	1/10W
IC201	8-752-076-06	IC CXA2040Q-T4		JR207	1-216-295-00	METAL GLAZE 0 5%	1/10W
IC202	8-759-376-80	IC MSP3410B-PS-F7-T (KV-24WS2B/24WS2E/24WS2U)		JR304	1-216-296-91	METAL GLAZE 0 5%	1/8W
	8-759-376-56	IC MSP3400C-PS-C6-T (KV-24WS2D/24WS2K/24WS2R)		JR305	1-216-296-91	METAL GLAZE 0 5%	1/8W
IC203	8-759-385-76	IC MC14052BDR2		R1	1-216-295-00	METAL GLAZE 0 5%	1/10W
IC301	8-752-076-09	IC CXA2000Q-TL		R2	1-216-025-00	METAL GLAZE 100 5%	1/10W
IC302	8-759-288-85	IC TDA4665T-T		R3	1-216-025-00	METAL GLAZE 100 5%	1/10W
IC303	8-759-430-79	IC TDA8395T/N3 (KV-24WS2B/24WS2D/24WS2E/24WS2K/24WS2R)		R4	1-216-013-00	METAL GLAZE 33 5%	1/10W
IC1001	8-759-376-76	IC SDA5273CP-GEG		R5	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
< COIL >				R7	1-216-041-00	METAL GLAZE 470 5%	1/10W
L10	1-410-379-31	INDUCTOR CHIP 6.8UH		R8	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
L102	1-408-406-00	INDUCTOR 5.6UH (KV-24WS2B)		R9	1-216-041-00	METAL GLAZE 470 5%	1/10W
L111	1-410-993-11	INDUCTOR CHIP 1UH		R10	1-216-041-00	METAL GLAZE 470 5%	1/10W
L120	1-408-408-00	INDUCTOR 8.2UH		R11	1-216-041-00	METAL GLAZE 470 5%	1/10W
L121	1-408-397-00	INDUCTOR 1UH		R12	1-216-041-00	METAL GLAZE 470 5%	1/10W
L122	1-408-408-00	INDUCTOR 8.2UH		R18	1-216-025-00	METAL GLAZE 100 5%	1/10W
L300	1-408-607-31	INDUCTOR 2.2UH		R19	1-216-025-00	METAL GLAZE 100 5%	1/10W
< TRANSISTOR >				R20	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q1	8-729-920-74	TRANSISTOR 2SC2412K-QR		R21	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q4	8-729-920-74	TRANSISTOR 2SC2412K-QR		R24	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q15	8-729-216-22	TRANSISTOR 2SA1162-G		R25	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
				R28	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
				R29	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
				R30	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
				R31	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
				R32	1-216-025-00	METAL GLAZE 100 5%	1/10W
				R33	1-216-025-00	METAL GLAZE 100 5%	1/10W

A

REF.NO.	PART NO.	DESCRIPTION	REMARK			REF.NO.	PART NO.	DESCRIPTION	REMARK		
R34	1-216-025-00	METAL GLAZE	100	5%	1/10W	R106	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R35	1-216-025-00	METAL GLAZE	100	5%	1/10W	R107	1-216-295-00	METAL GLAZE	0	5%	1/10W
R36	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	R110	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R37	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	R111	1-216-029-00	METAL GLAZE	150	5%	1/10W
R38	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	R112	1-216-029-00	METAL GLAZE	150	5%	1/10W
R39	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R113	1-216-001-00	METAL GLAZE	10	5%	1/10W
R40	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	R114	1-216-029-00	METAL GLAZE	150	5%	1/10W
R42	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	R115	1-216-037-00	METAL GLAZE	330	5%	1/10W
R44	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	R116	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R46	1-216-095-00	METAL GLAZE	82K	5%	1/10W	R117	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R47	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W			(KV-24WS2B/24WS2D/24WS2E/24WS2K/24WS2R)			
R48	1-216-121-91	METAL GLAZE	1M	5%	1/10W		1-216-056-00	METAL GLAZE	2.0K	5%	1/10W
								(KV-24WS2U)			
R49	1-216-025-00	METAL GLAZE	100	5%	1/10W	R118	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R50	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	R119	1-216-033-00	METAL GLAZE	220	5%	1/10W
R51	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	R120	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R52	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	R121	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R53	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	R122	1-216-041-00	METAL GLAZE	470	5%	1/10W
R54	1-216-025-00	METAL GLAZE	100	5%	1/10W	R123	1-216-031-00	METAL GLAZE	180	5%	1/10W
R58	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	R124	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R59	1-216-025-00	METAL GLAZE	100	5%	1/10W	R125	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R60	1-216-025-00	METAL GLAZE	100	5%	1/10W	R126	1-216-025-00	METAL GLAZE	100	5%	1/10W
R61	1-216-025-00	METAL GLAZE	100	5%	1/10W	R127	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R62	1-216-025-00	METAL GLAZE	100	5%	1/10W	R128	1-216-035-00	METAL GLAZE	270	5%	1/10W
R63	1-216-025-00	METAL GLAZE	100	5%	1/10W	R129	1-216-037-00	METAL GLAZE	330	5%	1/10W
R64	1-216-025-00	METAL GLAZE	100	5%	1/10W	R130	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R65	1-216-025-00	METAL GLAZE	100	5%	1/10W	R131	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R66	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R132	1-216-025-00	METAL GLAZE	100	5%	1/10W
R67	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R133	1-216-041-00	METAL GLAZE	470	5%	1/10W
R69	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R134	1-216-001-00	METAL GLAZE	10	5%	1/10W
R70	1-216-025-00	METAL GLAZE	100	5%	1/10W	R135	1-216-045-00	METAL GLAZE	680	5%	1/10W
R71	1-216-025-00	METAL GLAZE	100	5%	1/10W	R136	1-216-033-00	METAL GLAZE	220	5%	1/10W
R72	1-216-025-00	METAL GLAZE	100	5%	1/10W	R137	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R73	1-216-025-00	METAL GLAZE	100	5%	1/10W	R138	1-216-041-00	METAL GLAZE	470	5%	1/10W
R74	1-216-025-00	METAL GLAZE	100	5%	1/10W	R200	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R75	1-216-025-00	METAL GLAZE	100	5%	1/10W	R201	1-216-033-00	METAL GLAZE	220	5%	1/10W
R76	1-216-025-00	METAL GLAZE	100	5%	1/10W	R202	1-216-033-00	METAL GLAZE	220	5%	1/10W
R77	1-216-025-00	METAL GLAZE	100	5%	1/10W	R203	1-216-025-00	METAL GLAZE	100	5%	1/10W
R78	1-216-025-00	METAL GLAZE	100	5%	1/10W	R204	1-216-025-00	METAL GLAZE	100	5%	1/10W
R79	1-216-033-00	METAL GLAZE	220	5%	1/10W	R205	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R80	1-216-049-00	METAL GLAZE	1K	5%	1/10W	R206	1-216-033-00	METAL GLAZE	220	5%	1/10W
R81	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R208	1-216-041-00	METAL GLAZE	470	5%	1/10W
R82	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	R209	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R83	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R210	1-216-017-91	METAL GLAZE	47	5%	1/10W
R84	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R211	1-216-033-00	METAL GLAZE	220	5%	1/10W
R85	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R212	1-216-022-00	METAL GLAZE	75	5%	1/10W
R86	1-216-077-00	METAL GLAZE	15K	5%	1/10W	R213	1-216-022-00	METAL GLAZE	75	5%	1/10W
R87	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R214	1-216-025-00	METAL GLAZE	100	5%	1/10W
R88	1-216-025-00	METAL GLAZE	100	5%	1/10W	R216	1-216-025-00	METAL GLAZE	100	5%	1/10W
R91	1-216-025-00	METAL GLAZE	100	5%	1/10W	R217	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R92	1-216-025-00	METAL GLAZE	100	5%	1/10W	R218	1-216-025-00	METAL GLAZE	100	5%	1/10W
R93	1-216-033-00	METAL GLAZE	220	5%	1/10W	R219	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R94	1-216-033-00	METAL GLAZE	220	5%	1/10W	R220	1-216-295-00	METAL GLAZE	0	5%	1/10W
R95	1-216-033-00	METAL GLAZE	220	5%	1/10W	R221	1-216-039-00	METAL GLAZE	390	5%	1/10W
R97	1-216-295-00	METAL GLAZE	0	5%	1/10W	R222	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R98	1-216-295-00	METAL GLAZE	0	5%	1/10W	R223	1-216-295-00	METAL GLAZE	0	5%	1/10W
R101	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	R224	1-216-039-00	METAL GLAZE	390	5%	1/10W
R102	1-216-025-00	METAL GLAZE	100	5%	1/10W	R225	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R103	1-216-025-00	METAL GLAZE	100	5%	1/10W	R226	1-216-033-00	METAL GLAZE	220	5%	1/10W
R104	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R227	1-216-022-00	METAL GLAZE	75	5%	1/10W
R105	1-216-113-00	METAL GLAZE	470K	5%	1/10W						



REF.NO.	PART NO.	DESCRIPTION	REMARK		
R228	1-216-022-00	METAL GLAZE	75	5%	1/10W
R229	1-216-033-00	METAL GLAZE	220	5%	1/10W
R230	1-216-022-00	METAL GLAZE	75	5%	1/10W
R232	1-216-025-00	METAL GLAZE	100	5%	1/10W
R233	1-216-025-00	METAL GLAZE	100	5%	1/10W
R234	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R235	1-216-025-00	METAL GLAZE	100	5%	1/10W
R236	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R237	1-216-295-00	METAL GLAZE	0	5%	1/10W
R238	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R239	1-216-039-00	METAL GLAZE	390	5%	1/10W
R240	1-216-295-00	METAL GLAZE	0	5%	1/10W
R241	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R242	1-216-039-00	METAL GLAZE	390	5%	1/10W
R243	1-216-033-00	METAL GLAZE	220	5%	1/10W
R244	1-216-033-00	METAL GLAZE	220	5%	1/10W
R245	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R246	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R247	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R249	1-216-001-00	METAL GLAZE	10	5%	1/10W
R251	1-216-025-00	METAL GLAZE	100	5%	1/10W
R252	1-216-025-00	METAL GLAZE	100	5%	1/10W
R253	1-216-025-00	METAL GLAZE	100	5%	1/10W
R254	1-216-025-00	METAL GLAZE	100	5%	1/10W
R255	1-216-025-00	METAL GLAZE	100	5%	1/10W
R256	1-216-025-00	METAL GLAZE	100	5%	1/10W
R257	1-216-295-00	METAL GLAZE	0	5%	1/10W
R270	1-216-022-00	METAL GLAZE	75	5%	1/10W
R271	1-216-022-00	METAL GLAZE	75	5%	1/10W
R272	1-216-022-00	METAL GLAZE	75	5%	1/10W
R273	1-216-022-00	METAL GLAZE	75	5%	1/10W
R280	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R281	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R282	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R284	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R285	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R287	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R288	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R289	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R290	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R300	1-216-025-00	METAL GLAZE	100	5%	1/10W
R301	1-216-033-00	METAL GLAZE	220	5%	1/10W
R302	1-216-295-00	METAL GLAZE	0	5%	1/10W
R303	1-216-295-00	METAL GLAZE	0	5%	1/10W
R308	1-216-025-00	METAL GLAZE	100	5%	1/10W
R309	1-216-033-00	METAL GLAZE	220	5%	1/10W
R310	1-216-033-00	METAL GLAZE	220	5%	1/10W
R311	1-216-295-00	METAL GLAZE	0	5%	1/10W
R312	1-216-295-00	METAL GLAZE	0	5%	1/10W
R313	1-216-295-00	METAL GLAZE	0	5%	1/10W
R314	1-216-295-00	METAL GLAZE	0	5%	1/10W
R315	1-216-295-00	METAL GLAZE	0	5%	1/10W
R316	1-216-033-00	METAL GLAZE	220	5%	1/10W
R318	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R319	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R320	1-216-025-00	METAL GLAZE	100	5%	1/10W
R321	1-216-025-00	METAL GLAZE	100	5%	1/10W
R322	1-216-025-00	METAL GLAZE	100	5%	1/10W
R323	1-216-033-00	METAL GLAZE	220	5%	1/10W
R324	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK		
R326	1-216-025-00	METAL GLAZE	100	5%	1/10W
R327	1-216-025-00	METAL GLAZE	100	5%	1/10W
R328	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W
R329	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R330	1-216-025-00	METAL GLAZE	100	5%	1/10W
R331	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R332	1-216-025-00	METAL GLAZE	100	5%	1/10W
R333	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R334	1-216-041-00	METAL GLAZE	470	5%	1/10W
R335	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R336	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R337	1-216-025-00	METAL GLAZE	100	5%	1/10W
R338	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R339	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R340	1-216-025-00	METAL GLAZE	100	5%	1/10W
R341	1-216-025-00	METAL GLAZE	100	5%	1/10W
R342	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R343	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R344	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R345	1-216-025-00	METAL GLAZE	100	5%	1/10W
R346	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R347	1-216-025-00	METAL GLAZE	100	5%	1/10W
R348	1-216-025-00	METAL GLAZE	100	5%	1/10W
R349	1-216-025-00	METAL GLAZE	100	5%	1/10W
R350	1-216-042-00	METAL GLAZE	510	5%	1/10W
R351	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R352	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R353	1-216-033-00	METAL GLAZE	220	5%	1/10W
R354	1-216-295-00	METAL GLAZE	0	5%	1/10W
R357	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R359	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R370	1-216-295-00	METAL GLAZE	0	5%	1/10W
R1001	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1002	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1010	1-216-295-00	METAL GLAZE	0	5%	1/10W
R1012	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1014	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1020	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R1021	1-216-029-00	METAL GLAZE	150	5%	1/10W
R1022	1-216-029-00	METAL GLAZE	150	5%	1/10W
R1023	1-216-029-00	METAL GLAZE	150	5%	1/10W
R1024	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1026	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1027	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1028	1-216-025-00	METAL GLAZE	100	5%	1/10W
< TUNER >					
TU101	1-693-340-11	TUNER/VIF (FR) (KV-24WS2B)			
	1-693-338-11	TUNER/VIF (AEP)			
		(KV-24WS2D/24WS2E/24WS2K/24WS2R)			
	1-693-339-11	TUNER/VIF (UK) (KV-24WS2U)			
< CRYSTAL >					
X1	1-767-154-21	VIBRATOR, CERAMIC			
X201	1-760-628-11	VIBRATOR, CRYSTAL 18.432MHz			
X301	1-567-504-11	OSCILLATOR, CRYSTAL			
X302	1-567-505-11	OSCILLATOR, CRYSTAL			
X303	1-767-127-11	VIBRATOR, CERAMIC			
X1001	1-579-965-21	VIBRATOR, CRYSTAL			

C D3

REF.NO.	PART NO.	DESCRIPTION				REMARK			REF.NO.	PART NO.	DESCRIPTION				REMARK			
	*A-1638-101-A	C BOARD, COMPLETE *****							R706	1-247-815-91	CARBON	220	5%	1/4W				
									R707	1-249-408-11	CARBON	180	5%	1/4W				
									R709	1-202-844-00	SOLID	330K	10%	1/2W				
		< CAPACITOR >																
C702	1-102-115-00	CERAMIC	560PF	10%	50V				R711	1-247-843-11	CARBON	3.3K	5%	1/4W				
C703	1-102-116-00	CERAMIC	680PF	10%	50V				R712	1-260-103-11	CARBON	2.2K	5%	1/2W				
C708	1-162-114-00	CERAMIC	0.0047MF		2KV				R714	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F			
C710	1-107-652-11	ELECT	10MF	20%	250V				R715	1-249-417-11	CARBON	1K	5%	1/4W				
C712	1-102-116-00	CERAMIC	680PF	10%	50V				R716	1-247-815-91	CARBON	220	5%	1/4W				
C714	1-126-967-11	ELECT	47MF	20%	16V				R717	1-249-408-11	CARBON	180	5%	1/4W				
C717	1-102-114-00	CERAMIC	470PF	10%	50V				R718	1-202-814-11	SOLID	33K	10%	1/2W				
C718	1-102-114-00	CERAMIC	470PF	10%	50V				R720	1-247-843-11	CARBON	3.3K	5%	1/4W				
C719	1-102-114-00	CERAMIC	470PF	10%	50V				R722	1-202-848-00	SOLID	680K	10%	1/2W				
C722	1-101-880-00	CERAMIC	47PF	5%	50V				R723	1-249-417-11	CARBON	1K	5%	1/4W				
C723	1-101-880-00	CERAMIC	47PF	5%	50V				R724	1-202-846-00	SOLID	470K	10%	1/2W				
C724	1-101-880-00	CERAMIC	47PF	5%	50V				R726	1-260-103-11	CARBON	2.2K	5%	1/2W				
									R727	1-247-815-91	CARBON	220	5%	1/4W				
									R728	1-216-350-11	METAL OXIDE	1.2	5%	1W	F			
		< CONNECTOR >							R729	1-249-408-11	CARBON	180	5%	1/4W				
CN701	1-778-037-11	PIN, CONNECTOR (5MM PITCH) 6P							R731	1-247-843-11	CARBON	3.3K	5%	1/4W				
CN702	1-695-915-11	TAB (CONTACT)							R733	1-249-420-11	CARBON	1.8K	5%	1/4W				
CN703	*1-568-882-51	PIN, CONNECTOR 7P							R734	1-247-807-31	CARBON	100	5%	1/4W				
									R735	1-249-420-11	CARBON	1.8K	5%	1/4W				
									R736	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F			
		< DIODE >																
D701	8-719-109-72	DIODE	RD3.9ES-B2						R739	1-249-417-11	CARBON	1K	5%	1/4W				
D702	8-719-991-33	DIODE	1SS133T-77						R740	1-249-420-11	CARBON	1.8K	5%	1/4W				
D706	8-719-991-33	DIODE	1SS133T-77						R741	1-202-549-00	SOLID	100	20%	1/2W				
D707	8-719-991-33	DIODE	1SS133T-77						R744	1-249-421-11	CARBON	2.2K	5%	1/4W				
D708	8-719-991-33	DIODE	1SS133T-77						R745	1-249-421-11	CARBON	2.2K	5%	1/4W				
D709	8-719-991-33	DIODE	1SS133T-77						R746	1-249-421-11	CARBON	2.2K	5%	1/4W				
D710	8-719-991-33	DIODE	1SS133T-77						R747	1-249-437-11	CARBON	47K	5%	1/4W				
D711	8-719-302-43	DIODE	EL1Z						R748	1-249-417-11	CARBON	1K	5%	1/4W				
D714	8-719-991-33	DIODE	1SS133T-77						R749	1-249-435-11	CARBON	33K	5%	1/4W				
D715	8-719-991-33	DIODE	1SS133T-77															
										< VARIABLE RESISTOR >								


Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.


The components identified by shading and marked  $\Delta$  are critical for safety. Replace only with the part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK
< RELAY >			
RY2801	1-755-172-11	RELAY	
< COIL >			
T2801	1-411-981-11	COIL, CHOKE	
*****			
	*A-1642-193-A	D BOARD, COMPLETE	*****
	4-201-023-01	SPACER, INSULATING	
	4-202-373-01	SPRING, IC	
	4-202-710-01	SPACER, INSULATING	
< CAPACITOR >			
C502	1-102-824-00	CERAMIC 470PF	5% 50V
C503	1-136-165-00	FILM 0.1MF	5% 50V
C504	1-102-824-00	CERAMIC 470PF	5% 50V
C506	1-126-941-11	ELECT 470MF	20% 25V
C507	1-109-953-11	ELECT 2.2MF	20% 50V
C509	1-136-165-00	FILM 0.1MF	5% 50V
C510	1-126-969-11	ELECT 220MF	20% 50V
C511	1-136-202-11	FILM 0.33MF	5% 63V
C513	1-106-220-00	MYLAR 0.1MF	10% 100V
C514	1-136-165-00	FILM 0.1MF	5% 50V
C515	1-126-941-11	ELECT 470MF	20% 25V
C517	1-126-941-11	ELECT 470MF	20% 25V
C518	1-102-228-00	CERAMIC 470PF	10% 500V
C519	1-102-228-00	CERAMIC 470PF	10% 500V
C520	1-126-941-11	ELECT 470MF	20% 25V
C521	1-107-698-11	ELECT 10MF	20% 25V
C522	1-126-964-11	ELECT 10MF	20% 50V
C523	1-136-165-00	FILM 0.1MF	5% 50V
C600 $\Delta$	1-113-890-51	ELECT 0.0022MF	20% 250V
C601 $\Delta$	1-161-964-91	CERAMIC 0.0047MF	250V
C602 $\Delta$	1-161-964-91	CERAMIC 0.0047MF	250V
C603	1-125-555-11	ELECT 330MF	20% 400V
C604	1-126-968-11	ELECT 100MF	20% 50V
C605	1-107-929-11	ELECT 10MF	20% 100V
C606	1-162-318-11	CERAMIC 0.001MF	10% 500V
C607	1-104-666-11	ELECT 220MF	20% 25V
C608	1-109-880-11	FILM 0.0015MF	3% 2KV
C611	1-102-228-00	CERAMIC 470PF	10% 500V
C612	1-111-160-91	ELECT 22MF	20% 100V
C613	1-124-347-00	ELECT 100MF	20% 160V
C614	1-128-526-11	ELECT 100MF	20% 25V
C615	1-111-067-11	ELECT 0.001MF	20% 25V
C616	1-111-067-11	ELECT 0.001MF	20% 25V
C617	1-128-339-51	ELECT 2200MF	20% 16V
C618	1-136-165-00	FILM 0.1MF	5% 50V
C619	1-102-228-00	CERAMIC 470PF	10% 500V
C620	1-102-228-00	CERAMIC 470PF	10% 500V
C621	1-136-165-00	FILM 0.1MF	5% 50V
C622	1-107-925-11	ELECT 1.0MF	20% 100V
C623	1-104-666-11	ELECT 220MF	20% 25V
C624	1-136-165-00	FILM 0.1MF	5% 50V
C625	1-126-967-11	ELECT 47MF	20% 50V
C626	1-104-666-11	ELECT 220MF	20% 25V
C628	1-126-964-11	ELECT 10MF	20% 50V
C629	1-111-097-11	ELECT 2200MF	20% 35V







REF.NO.	PART NO.	DESCRIPTION	REMARK
C630	1-111-097-11	ELECT 2200MF	20% 35V
C631	1-126-965-11	ELECT 22MF	20% 50V
C632	1-104-666-11	ELECT 220MF	20% 25V
C633 $\Delta$	1-107-563-12	FILM 0.1MF	20% 300V
C634 $\Delta$	1-107-563-12	FILM 0.1MF	20% 300V
C635 $\Delta$	1-107-563-12	FILM 0.1MF	20% 300V
C636 $\Delta$	1-113-890-51	ELECT 0.0022MF	20% 250V
C638	1-136-203-11	FILM 0.01MF	10% 630V
C640	1-106-220-00	MYLAR 0.1MF	10% 100V
C644	1-136-559-11	MYLAR 0.0047MF	10% 400V
C647	1-162-116-00	CERAMIC 680PF	10% 2KV
C651	1-102-228-00	CERAMIC 470PF	10% 500V
C800	1-137-368-11	FILM 0.0047MF	5% 50V
C801	1-137-368-11	FILM 0.0047MF	5% 50V
C802	1-102-114-00	CERAMIC 470PF	10% 50V
C804	1-136-165-00	FILM 0.1MF	5% 50V
C805	1-136-207-11	FILM 0.047MF	10% 250V
C806	1-104-999-11	MYLAR 0.1MF	10% 200V
C807	1-136-540-11	FILM 0.82MF	5% 200V
C808	1-136-104-00	FILM 0.16MF	5% 200V
C810	1-107-683-11	ELECT 2.2MF	0 250V
C811	1-102-212-00	CERAMIC 820PF	10% 500V
C812	1-136-540-11	FILM 0.82MF	5% 200V
C813	1-129-722-00	FILM 0.047MF	10% 630V
C814	1-136-084-00	FILM 0.0145MF	3% 2KV
C815	1-106-367-00	MYLAR 0.01MF	10% 400V
C816	1-162-134-11	CERAMIC 470PF	10% 2KV
C817	1-162-116-00	CERAMIC 680PF	10% 2KV
C818	1-162-134-11	CERAMIC 470PF	10% 2KV
C819	1-136-208-11	FILM 0.068MF	10% 250V
C820	1-102-114-00	CERAMIC 470PF	10% 50V
C821	1-162-114-00	CERAMIC 0.0047MF	2KV
C822	1-107-662-11	ELECT 22MF	20% 250V
C824	1-123-024-21	ELECT 33MF	160V
C829	1-124-902-00	ELECT 0.47MF	20% 50V
C830	1-124-902-00	ELECT 0.47MF	20% 50V
C832	1-124-903-11	ELECT 1MF	20% 50V
C834	1-128-551-11	ELECT 22MF	20% 25V
C835	1-162-318-11	CERAMIC 0.001MF	10% 500V
C836	1-162-117-00	CERAMIC 100PF	10% 500V
C837	1-102-978-00	CERAMIC 220PF	5% 50V
C838	1-102-228-00	CERAMIC 470PF	10% 500V
C839	1-136-207-11	FILM 0.047MF	10% 250V
C841	1-102-110-00	CERAMIC 220PF	10% 50V
C845	1-101-880-00	CERAMIC 47PF	5% 50V
C901	1-101-810-00	CERAMIC 100PF	5% 500V
C902	1-137-372-11	FILM 0.022MF	5% 50V
C903	1-137-372-11	FILM 0.022MF	5% 50V
C904	1-104-665-11	ELECT 100MF	20% 25V
C905	1-126-964-11	ELECT 10MF	20% 50V
C906	1-126-964-11	ELECT 10MF	20% 50V
C907	1-126-964-11	ELECT 10MF	20% 50V
C908	1-126-964-11	ELECT 10MF	20% 50V
C911	1-126-964-11	ELECT 10MF	20% 50V
C913	1-101-810-00	CERAMIC 100PF	5% 500V
C914	1-101-004-00	CERAMIC 0.01MF	50V
C915	1-136-166-00	FILM 0.12MF	5% 50V
C916	1-162-318-11	CERAMIC 0.001MF	10% 500V
C1200	1-136-165-00	FILM 0.1MF	5% 50V
C1201	1-136-173-00	FILM 0.47MF	5% 50V

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and marked  are critical for safety. Replace only with the part number specified.

KV-24WS2



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C1202	1-136-173-00	FILM 0.47MF	5% 50V	D631	8-719-109-93	DIODE RD6.2ES-B2	
C1203	1-136-169-00	FILM 0.22MF	5% 50V	D800	8-719-991-33	DIODE 1SS133T-77	
C1204	1-136-169-00	FILM 0.22MF	5% 50V	D801	8-719-991-33	DIODE 1SS133T-77	
C1205	1-101-005-00	CERAMIC 0.022MF	50V	D802	8-719-991-33	DIODE 1SS133T-77	
C1206	1-101-005-00	CERAMIC 0.022MF	50V	D803	8-719-908-03	DIODE GP08D	
C1207	1-126-933-11	ELECT 100MF	20% 16V	D807	8-719-302-43	DIODE EL1Z	
C1208	1-126-963-11	ELECT 4.7MF	20% 50V	D808	8-719-908-03	DIODE GP08D	
C1209	1-126-963-11	ELECT 4.7MF	20% 50V	D809	8-719-018-82	DIODE RGP02-20EL-6394	
C1212	1-162-318-11	CERAMIC 0.001MF	10% 500V	D810	8-719-302-43	DIODE EL1Z	
C1213	1-162-318-11	CERAMIC 0.001MF	10% 500V	D812	8-719-038-49	DIODE FMS-3FU-LF027-103	
C1214	1-126-933-11	ELECT 100MF	20% 16V	D815	8-719-908-03	DIODE GP08D	
C1215	1-136-173-00	FILM 0.47MF	5% 50V	D817	8-719-109-85	DIODE RD5.1ES-B2	
C1216	1-137-366-11	FILM 0.0022MF	5% 50V	D901	8-719-030-11	DIODE SLA-570KT3F	
C1217	1-137-366-11	FILM 0.0022MF	5% 50V	*4-203-258-01		HOLDER,LED ;D901	
C1218	1-126-935-11	ELECT 470MF	20% 16V	D902	8-719-923-60	DIODE MTZJ-T-77-9.1A	
< CONNECTOR >				D903	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN600	 1-508-786-11	PIN, CONNECTOR (5MM PITCH) 2P		D904	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN601	 1-508-765-11	PIN, CONNECTOR (5MM PITCH) 3P		D905	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN603	 *1-580-844-11	PIN, CONNECTOR (POWER)		D906	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN800	*1-580-798-11	CONNECTOR PIN (DY) 6P		D1201	8-719-109-72	DIODE RD3.9ES-B2	
CN803	1-695-915-11	TAB (CONTACT)		< FUSE >			
CN804	1-778-037-11	PIN, CONNECTOR 6P		F601	 1-576-232-21	FUSE (H.B.C.) 5A/250V	
CN807	1-568-878-51	PIN, CONNECTOR 3P		 1-533-230-12		HOLDER, FUSE ;F601	
CN900	1-568-678-11	TERMINAL BLOCK, S 3P		< FERRITE BEAD >			
CN902	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P		FB600	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
CN1401	*1-568-880-51	PIN, CONNECTOR 5P		FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
CN1407	1-564-511-11	PLUG, CONNECTOR 8P		FB602	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
CN1408	*1-568-879-11	PIN, CONNECTOR 4P		FB604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
< DIODE >				FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
D500	8-719-109-85	DIODE RD5.1ES-B2		FB606	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
D502	8-719-979-85	DIODE EGP20G		FB607	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
D503	8-719-979-85	DIODE EGP20G		FB608	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
D504	8-719-991-33	DIODE 1SS133T-77		FB800	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
D505	8-719-982-03	DIODE MTZJ-3.6A		< IC >			
D506	8-719-991-33	DIODE 1SS133T-77		IC500	8-759-192-71	IC STV9379	
D507	8-719-109-85	DIODE RD5.1ES-B2			1-695-915-11	TAB (CONTACT) ;IC500	
D600	8-719-510-53	DIODE D4SB60L		IC600	8-749-010-92	IC STR-S6709	
D601	8-719-046-77	DIODE EM1-V1		IC601	 8-749-924-92	IC TLP721(D4-)	
D603	8-719-109-97	DIODE RD6.8ES-B2		IC602	8-749-920-61	IC SE-135N	
D604	8-719-046-75	DIODE EU-1-V1		IC603	8-759-144-82	IC $\mu$ PC2405HF	
D605	8-719-302-43	DIODE EL1Z		IC604	8-759-510-52	IC TEA7605	
D606	8-719-302-43	DIODE EL1Z		IC606	8-759-267-25	IC LM2940T-9.0	
D607	8-719-046-78	DIODE EG-1Z-V1		IC800	8-759-103-93	IC $\mu$ PC393C	
D608	8-719-302-06	DIODE EU2A		IC900	8-742-014-00	RAY CATCHER ELEMENT SBX1981-51	
D609	8-719-312-10	DIODE RU4AM-T3		IC901	8-749-012-12	IC IS474	
D610	8-719-046-74	DIODE AU-01Z-V1		IC1200	8-759-250-68	IC TDA7264	
D611	8-719-058-38	DIODE FMN-G12S		IC1201	8-759-502-21	IC TDA2822M	
D612	8-719-046-76	DIODE RU-3YX-V1		< JACK SOCKET >			
D613	8-719-058-38	DIODE FMN-G12S		J900	1-764-606-11	JACK	
D614	8-719-058-38	DIODE FMN-G12S		J1200	1-770-218-11	JACK, PIN	
D615	8-719-046-75	DIODE EU-1-V1		< COIL >			
D616	8-719-110-03	DIODE RD7.5ESEB2		L502	1-412-519-11	INDUCTOR 3.3UH	
D617	8-719-991-33	DIODE 1SS133T-77		L503	1-412-519-11	INDUCTOR 3.3UH	
D618	8-719-991-33	DIODE 1SS133T-77		L609	1-412-533-21	INDUCTOR 47UH	
D619	8-719-991-33	DIODE 1SS133T-77		L611	1-412-527-11	INDUCTOR 15UH	
D620	8-719-991-33	DIODE 1SS133T-77		L612	1-412-522-41	INDUCTOR 5.6UH	
D622	8-719-923-60	DIODE MTZJ-T-77-9.1A					
D625	8-719-991-33	DIODE 1SS133T-77					
D626	8-719-046-74	DIODE AU-01Z-V1					

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and marked  $\Delta$  are critical for safety. Replace only with the part number specified.

D

REF.NO.	PART NO.	DESCRIPTION	REMARK
L613	1-412-522-41	INDUCTOR 5.6UH	
L615	1-412-529-11	INDUCTOR 22UH	
L616	1-412-533-21	INDUCTOR 47UH	
L801	1-459-111-00	COIL, DRAM CORE (CDI)	
L802	1-459-104-00	COIL, WITH CORE	
L803	1-420-872-00	COIL, AIR-CORE	
L804	1-429-306-11	TRANSFORMER, HORIZONTAL LINEARITY	
L805	1-406-675-11	COIL, CHOK 4.7MMH	
L809	1-414-187-11	INDUCTOR 47UH	
L811	1-406-978-11	COIL, CHOK 150UH	
L813	1-412-552-11	INDUCTOR 2.2MMH	
L901	1-408-603-31	INDUCTOR 10UH	
L902	1-408-603-31	INDUCTOR 10UH	
L903	1-408-409-00	INDUCTOR 10UH	
L904	1-408-409-00	INDUCTOR 10UH	
< IC LINK >			
PS600	$\Delta$ 1-532-686-91	LINK, IC 2.7A (ICP-F75)	
PS601	$\Delta$ 1-532-686-91	LINK, IC 2.7A (ICP-F75)	
PS602	$\Delta$ 1-532-686-91	LINK, IC 2.7A (ICP-F75)	
PS603	$\Delta$ 1-532-686-91	LINK, IC 2.7A (ICP-F75)	
< TRANSISTOR >			
Q501	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q502	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q503	8-729-900-89	TRANSISTOR DTC144ES	
Q601	8-729-025-04	TRANSISTOR 2SC3852A	
Q602	8-729-320-28	TRANSISTOR 2SA1667	
Q603	8-729-805-05	TRANSISTOR 2SC3601-E	
Q604	8-729-024-35	TRANSISTOR 2SC2808STP-R	
Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q606	8-729-900-65	TRANSISTOR DTA144ES	
Q607	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q800	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q801	8-729-017-06	TRANSISTOR 2SC4793	
Q802	8-729-016-32	TRANSISTOR 2SC4927-01	
Q803	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q805	8-729-900-89	TRANSISTOR DTC144ES	
Q900	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1200	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1201	8-729-900-74	TRANSISTOR DTC143TS	
Q1202	8-729-900-80	TRANSISTOR DTC114ES	
Q1203	8-729-900-74	TRANSISTOR DTC143TS	
Q1204	8-729-900-74	TRANSISTOR DTC143TS	
< RESISTOR >			
R500	1-215-457-00	METAL 33K 1%	1/4W
R502	1-249-421-11	CARBON 2.2K 5%	1/4W
R503	1-249-429-11	CARBON 10K 5%	1/4W
R504	1-215-453-00	METAL 22K 1%	1/4W
R505	1-249-382-11	CARBON 1.2 5%	1/4W F
R507	1-215-888-00	METAL OXIDE 220 5%	2W F
R508	1-216-371-00	METAL OXIDE 1.5 5%	2W F
R509	1-249-443-11	CARBON 0.47 5%	1/4W F
R510	1-249-443-11	CARBON 0.47 5%	1/4W F
R519	1-215-429-00	METAL 2.2K 1%	1/4W
R520	1-215-457-00	METAL 33K 1%	1/4W
R521	1-215-457-00	METAL 33K 1%	1/4W
R522	1-247-863-91	CARBON 22K 5%	1/4W
R523	1-247-863-91	CARBON 22K 5%	1/4W
R524	1-249-425-11	CARBON 4.7K 5%	1/4W

REF.NO.	PART NO.	DESCRIPTION	REMARK
R525	1-249-425-11	CARBON 4.7K 5%	1/4W
R526	1-249-421-11	CARBON 2.2K 5%	1/4W
R527	1-215-425-00	METAL 1.5K 1%	1/4W
R600	1-216-490-11	METAL OXIDE 39K 5%	3W F
R601	1-249-417-11	CARBON 1K 5%	1/4W
R602	1-215-473-00	METAL 150K 1%	1/4W
R603	1-215-898-11	METAL OXIDE 10K 5%	2W F
R604	1-249-420-11	CARBON 1.8K 5%	1/4W
R605	1-216-362-11	METAL OXIDE 0.27 5%	2W F
R607	1-216-421-11	METAL OXIDE 12 5%	1W F
R608	1-216-365-00	METAL OXIDE 0.47 5%	2W F
R610	1-215-419-00	METAL 820 1%	1/4W
R611	1-216-354-11	METAL OXIDE 2.7 5%	1W F
R612	1-249-428-11	CARBON 8.2K 5%	1/4W
R613	1-249-417-11	CARBON 1K 5%	1/4W
R614	1-215-877-11	METAL OXIDE 22K 5%	1W F
R615	1-249-435-11	CARBON 33K 5%	1/4W
R616	1-215-471-00	METAL 120K 1%	1/4W
R617	1-215-901-00	METAL OXIDE 33K 5%	2W F
R618	1-247-863-91	CARBON 22K 5%	1/4W
R619	1-216-425-11	METAL OXIDE 56 5%	1W F
R620	1-260-131-11	CARBON 470K 5%	1/2W
R621	1-216-425-11	METAL OXIDE 56 5%	1W F
R622	1-249-437-11	CARBON 47K 5%	1/4W
R623	1-249-429-11	CARBON 10K 5%	1/4W
R624	1-249-393-11	CARBON 10 5%	1/4W F
R625	1-249-434-11	CARBON 27K 5%	1/4W
R626	1-249-430-11	CARBON 12K 5%	1/4W
R627	1-216-347-11	METAL OXIDE 0.68 5%	1W F
R628	1-249-415-11	CARBON 680 5%	1/4W F
R629	$\Delta$ 1-244-945-91	CARBON 1M 5%	1/2W
R630	$\Delta$ 1-218-265-21	METAL 8.2M 5%	1W
R631	$\Delta$ 1-202-961-11	WIREWOUND 1.8 5%	10W
R632	1-247-807-31	CARBON 100 5%	1/4W
R633	1-247-807-31	CARBON 100 5%	1/4W
R634	1-249-397-11	CARBON 22 5%	1/4W F
R635	1-249-437-11	CARBON 47K 5%	1/4W
R636	1-249-417-11	CARBON 1K 5%	1/4W
R637	1-247-815-91	CARBON 220 5%	1/4W
R638	1-247-863-91	CARBON 22K 5%	1/4W
R639	1-215-439-00	METAL 5.6K 1%	1/4W
R642	$\Delta$ 1-202-961-11	WIREWOUND 1.8 5%	10W
R645	1-249-422-11	CARBON 2.7K 5%	1/4W
R646	1-249-377-11	CARBON 0.47 5%	1/4W F
R647	1-202-933-61	FUSIBLE 0.1 10%	1/2W F
R649	1-249-426-11	CARBON 5.6K 5%	1/4W F
R800	1-249-429-11	CARBON 10K 5%	1/4W
R802	1-249-429-11	CARBON 10K 5%	1/4W
R803	1-247-843-11	CARBON 3.3K 5%	1/4W
R805	1-249-431-11	CARBON 15K 5%	1/4W
R806	1-247-891-00	CARBON 330K 5%	1/4W
R809	1-247-891-00	CARBON 330K 5%	1/4W
R813	1-215-867-00	METAL OXIDE 470 5%	1W F
R814	1-249-411-11	CARBON 330 5%	1/4W
R816	1-216-481-11	METAL OXIDE 1.2K 5%	3W F
R817	1-216-481-11	METAL OXIDE 1.2K 5%	3W F
R818	1-215-883-11	METAL OXIDE 33 5%	2W F
R819	1-216-345-11	METAL OXIDE 0.47 5%	1W F
R820	1-249-403-11	CARBON 68 5%	1/4W
R821	1-215-909-11	METAL OXIDE 47 5%	3W F

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and marked  $\Delta$  are critical for safety. Replace only with the part number specified.


KV-24WS2


D K1

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R822	1-215-868-00	METAL OXIDE	680 5% 1W F	< RELAY >			
R824	1-249-420-11	CARBON	1.8K 5% 1/4W	RY600 $\Delta$ 1-755-018-11 RELAY			
R826	1-247-752-11	CARBON	1K 5% 1/2W	< SWITCH >			
R827	1-249-425-11	CARBON	4.7K 5% 1/4W	S601 $\Delta$ 1-571-433-31 SWITCH, PUSH (AC POWER)			
R828	1-249-434-11	CARBON	27K 5% 1/4W	S900 1-692-979-11 SWITCH, TACTILE			
R829	1-249-493-11	CARBON	56K 5% 1/2W	S901 1-692-979-11 SWITCH, TACTILE			
R830	1-217-778-11	FUSIBLE	1K 5% 1W F	S902 1-692-979-11 SWITCH, TACTILE			
R832	1-215-877-11	METAL OXIDE	22K 5% 1W F	< SPARK GAP >			
R833	1-247-891-00	CARBON	330K 5% 1/4W	SG801 1-519-422-11 GAP, SPARK			
R835	1-216-471-11	METAL OXIDE	27 5% 3W F	< TRANSFORMER >			
R836	1-249-439-11	CARBON	68K 5% 1/4W	LF600 $\Delta$ 1-421-776-21 LFT			
R837	1-249-427-11	CARBON	6.8K 5% 1/4W	LF601 $\Delta$ 1-421-776-21 LFT			
R840	1-247-815-91	CARBON	220 5% 1/4W	T601 $\Delta$ 1-429-604-11 SRT			
R841	1-249-418-11	CARBON	1.2K 5% 1/4W	T800 1-426-981-11 TRANSFORMER, FERRITE (PMT)			
R842	1-247-879-91	CARBON	100K 5% 1/4W	T803 $\Delta$ 1-453-220-11 TRANSFORMER ASSY, FLYBACK (NX-1670/U2B4)			
R843	1-247-891-00	CARBON	330K 5% 1/4W	T804 1-437-090-31 HDT			
R846	1-247-893-11	CARBON	390K 5% 1/4W	< THERMISTOR >			
R847	1-247-897-11	CARBON	560K 5% 1/4W	THP600 $\Delta$ 1-809-827-11 THERMISTOR, POSITIVE			
R848	1-249-438-11	CARBON	56K 5% 1/4W	*****			
R849	1-249-429-11	CARBON	10K 5% 1/4W	*A-1649-018-A K1 BOARD, COMPLETE *****			
R850	1-249-425-11	CARBON	4.7K 5% 1/4W	4-202-373-01 SPRING, IC			
R851	1-215-898-11	METAL OXIDE	10K 5% 2W F	< CAPACITOR >			
R870	1-216-349-00	METAL OXIDE	1 5% 1W F	C261 1-136-173-00 FILM 0.47MF 5% 50V			
R900	1-247-815-91	CARBON	220 5% 1/4W	C262 1-136-165-00 FILM 0.1MF 5% 50V			
R901	1-247-734-11	CARBON	39 5% 1/2W	C263 1-136-173-00 FILM 0.47MF 5% 50V			
R902	1-247-734-11	CARBON	39 5% 1/2W	C264 1-136-173-00 FILM 0.47MF 5% 50V			
R904	1-249-389-11	CARBON	4.7 5% 1/4W F	C265 1-137-366-11 FILM 0.0022MF 5% 50V			
R905	1-247-804-11	CARBON	75 5% 1/4W	C266 1-137-366-11 FILM 0.0022MF 5% 50V			
R906	1-247-804-11	CARBON	75 5% 1/4W	C267 1-136-169-00 FILM 0.22MF 5% 50V			
R907	1-247-804-11	CARBON	75 5% 1/4W	C268 1-136-169-00 FILM 0.22MF 5% 50V			
R908	1-249-401-11	CARBON	47 5% 1/4W	C269 1-101-005-00 CERAMIC 0.022MF 50V			
R909	1-249-429-11	CARBON	10K 5% 1/4W	C270 1-101-005-00 CERAMIC 0.022MF 50V			
R910	1-249-422-11	CARBON	2.7K 5% 1/4W	C271 1-126-952-11 ELECT 1000MF 20% 35V			
R911	1-249-426-11	CARBON	5.6K 5% 1/4W	C272 1-126-952-11 ELECT 1000MF 20% 35V			
R912	1-249-429-11	CARBON	10K 5% 1/4W	< CONNECTOR >			
R913	1-247-863-91	CARBON	22K 5% 1/4W	CN1303 *1-568-879-11 PIN, CONNECTOR 4P			
R914	1-249-437-11	CARBON	47K 5% 1/4W	CN1304 *1-568-879-11 PIN, CONNECTOR 4P			
R919	1-249-437-11	CARBON	47K 5% 1/4W	CN1306 1-568-878-51 PIN, CONNECTOR 3P			
R921	1-249-437-11	CARBON	47K 5% 1/4W	CN1307 *1-564-511-11 PLUG, CONNECTOR 8P			
R922	1-247-807-31	CARBON	100 5% 1/4W	< DIODE >			
R923	1-249-421-11	CARBON	2.2K 5% 1/4W	D260 8-719-109-72 DIODE RD3.9ES-B2			
R924	1-259-884-11	CARBON	4.7M 5% 1/4W	< IC >			
R925	1-247-807-31	CARBON	100 5% 1/4W	IC260 8-759-250-68 IC TDA7264			
R926	1-259-884-11	CARBON	4.7K 5% 1/4W	< TRANSISTOR >			
R1200	1-249-425-11	CARBON	4.7K 5% 1/4W	Q260 8-729-900-74 TRANSISTOR DTC143TS			
R1201	1-249-434-11	CARBON	27K 5% 1/4W				
R1202	1-249-389-11	CARBON	4.7 5% 1/4W F				
R1203	1-249-421-11	CARBON	2.2K 5% 1/4W				
R1204	1-249-421-11	CARBON	2.2K 5% 1/4W				
R1205	1-249-428-11	CARBON	8.2K 5% 1/4W				
R1206	1-249-428-11	CARBON	8.2K 5% 1/4W				
R1207	1-249-413-11	CARBON	470 5% 1/4W				
R1208	1-212-849-00	FUSIBLE	4.7 5% 1/4W F				
R1209	1-212-849-00	FUSIBLE	4.7 5% 1/4W F				
R1210	1-249-413-11	CARBON	470 5% 1/4W				
R1211	1-249-424-11	CARBON	3.9K 5% 1/4W				
R1212	1-249-424-11	CARBON	3.9K 5% 1/4W				
R1213	1-249-421-11	CARBON	2.2K 5% 1/4W				
R1216	1-249-413-11	CARBON	470 5% 1/4W				
R1217	1-249-425-11	CARBON	4.7K 5% 1/4W				










K1

J

Les composants identifiés par une trame et une marque  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked  are critical for safety. Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q261	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< RESISTOR >			
R261	1-249-413-11	CARBON 470 5%	1/4W
R262	1-249-421-11	CARBON 2.2K 5%	1/4W
R263	1-249-434-11	CARBON 27K 5%	1/4W
R264	1-249-425-11	CARBON 4.7K 5%	1/4W
R265	1-249-424-11	CARBON 3.9K 5%	1/4W
R266	1-249-424-11	CARBON 3.9K 5%	1/4W
R267	1-212-849-00	FUSIBLE 4.7 5%	1/4W F
R268	1-212-849-00	FUSIBLE 4.7 5%	1/4W F
*****			
*A-1651-088-A J BOARD, COMPLETE			
*****			
< CAPACITOR >			
C290	1-101-003-00	CERAMIC 0.0047MF	50V
C291	1-101-005-00	CERAMIC 0.022MF	50V
C293	1-101-003-00	CERAMIC 0.0047MF	50V
C294	1-101-005-00	CERAMIC 0.022MF	50V
C296	1-101-003-00	CERAMIC 0.0047MF	50V
C297	1-101-005-00	CERAMIC 0.022MF	50V
< CONNECTOR >			
CN1204	*1-564-519-11	PLUG, CONNECTOR 4P	
CN1206	*1-564-518-11	PLUG, CONNECTOR 3P	
CN1208	*1-564-519-11	PLUG, CONNECTOR 4P	
CN1210	*1-564-519-11	PLUG, CONNECTOR 4P	
CN1211	*1-564-519-11	PLUG, CONNECTOR 4P	
CN1299	*1-564-519-11	PLUG, CONNECTOR 4P	
< SOCKET >			
J291	1-537-339-11	TERMINAL BOARD	
J292	1-537-339-11	TERMINAL BOARD	
< RESISTOR >			
R290	1-249-426-11	CARBON 5.6K 5%	1/4W
R291	1-249-426-11	CARBON 5.6K 5%	1/4W
R292	1-249-426-11	CARBON 5.6K 5%	1/4W
*****			

REF.NO.	PART NO.	DESCRIPTION	REMARK
MISCELLANEOUS			
*****			
	1-411-620-11	COIL, DEGAUSSING	
	1-452-032-00	MAGNET, DISK; 10MM Ø	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
	1-453-220-11	TRANSFORMER ASSY, FLYBACK	(NX-1670/U2B4)
	1-505-154-11	SPEAKER (6.5CM)	
	1-505-155-11	SPEAKER (10CM)	
	1-540-006-22	CAP ASSY, HIGH-VOLTAGE	
	1-571-433-31	SWITCH, PUSH (AC POWER)	
	1-690-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V	(KV-24WS2B/24WS2E/24WS2K/24WS2R)
	1-765-286-11	CORD, POWER 2.5A/250V	(KV-24WS2D)
	1-776-860-11	CORD, POWER (FILTER) 3.0A/250V	(KV-24WS2U)
	1-693-340-11	TUNER/VIF (FR) (KV-24WS2B)	
	1-693-338-11	TUNER/VIF (AEP) (KV-24WS2D/24WS2E/24WS2K/24WS2R)	
	1-693-339-11	TUNER/VIF (UK) (KV-24WS2U)	
	8-451-452-11	DEFLECTION YOKE (Y24GIAM)	
V901 	8-737-802-05	PICTURE TUBE (SD-174)(W56LEZ010X)	
*****			
ACCESSORIES AND PACKING MATERIALS			
*****			
	1-765-654-11	CABLE SPEAKER	
*4-042-476-01		BAG, PROTECTION	
*4-203-133-01		CUSHION (LOWER) (ASSY)	
*4-203-134-01		INDIVIDUAL CARTON	
	4-203-564-51	MANUAL, INSTRUCTION (KV-24WS2B) (FRENCH/GERMAN/ITALIAN/DUTCH)	
	4-203-564-11	MANUAL, INSTRUCTION (KV-24WS2D) (DUTCH/GREEK/ENGLISH/GERMAN)	
	4-203-564-81	MANUAL, INSTRUCTION (KV-24WS2E) (FINNISH/DANISH/NORWEGIAN/SWEDISH)	
	4-203-564-91	MANUAL, INSTRUCTION (KV-24WS2K/24WS2R) (CZECH/ENGLISH/POLISH/BULGARIAN/RUSSIAN)	
	4-203-564-61	MANUAL, INSTRUCTION (KV-24WS2U) (ENGLISH)	
	*4-203-565-01	CUSHION (UPPER) (ASSY)	
REMOTE COMMANDER			
*****			
	1-473-692-11	COMMANDER, STANDARD TYPE (RM-862)	
*****			

# SONY® SERVICE MANUAL

## BE-3D CHASSIS

MODEL	COMMANDER	DEST	CHASSIS NO.	MODEL	COMMANDER	DEST	CHASSIS NO.
<b>KV-24WS2B</b>	RM-862	French	SCC-K01P-A	<b>KV-24WS2K</b>	RM-862	OIRT	SCC-K20C-A
<b>KV-24WS2D</b>	RM-862	AEP	SCC-K07Q-A	<b>KV-24WS2R</b>	RM-862	OIRT	SCC-K20D-A
<b>KV-24WS2E</b>	RM-862	Spanish	SCC-K06P-A	<b>KV-24WS2U</b>	RM-862	UK	SCC-K04K-A

## SUPPLEMENT

SUBJECT : CHANGE OF CAPACITOR ON KV-24WS2R

File this supplement with the service manual

**INTRODUCTION :** Change of block capacitor to prevent damage occurring in the market caused by large variations of the power supply in Russia.

### SECTION 7 ELECTRICAL PARTS LIST (Page 80)

REF. NO.	PART. NO	DESCRIPTION	REMARK
C603	1-117-752-11	ELECT 330MF 20% 450V	